County of Ventura

PLANNING DIVISION

MEMORANDUM

DATE: 1/20/95

TO: Distribution List

FROM: Kelly Scoles, RMA/Planning, (805) 654-5042

SUBJECT: PAGE CHANGES FOR GENERAL PLAN DOCUMENTS

Page changes for General Plan documents have been prepared as a result of approval by the Board of Supervisors of amendments that occurred on December 20, 1994.

The attachments include the following:

1. ~~Page changes for~~ Full Copy the Goals, Policies and Programs document; and
2. ~~Page changes for~~ Full Copy the Public Facilities and Services Appendix.

KS:nf/1I226-5.94

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County of Ventura

PLANNING DIVISION

93 00316

MEMORANDUM

DATE: October 4, 1994

TO: Distribution List

FROM: Joseph Eisenhut, RMA/Planning, (805) 654-2464

SUBJECT: Updated General Plan Documents

New General Plan documents have been prepared as a result of approval by the Board of Supervisors of various amendments that have occurred since October 19, 1993. The attached FOUR ~~three~~ full documents replace all earlier editions of the respective documents. ~~Additionally, page changes are attached for a fourth document.~~

The attachments include the following:

1. General Plan Goals, Policies and Programs, (July 12, 1994 ed.);
2. General Plan Resources Appendix, (July 12, 1994 ed.);
3. General Plan Public Facilities and Services Appendix, (July 12, 1994 ed.); and
4. ~~Page changes only, for the~~ General Plan Hazards Appendix, (July 12, 1994 ed.).

JE:nf/1I226-5.94

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County of Ventura

PLANNING DIVISION

2/94

MEMORANDUM

TO: Distribution List

FROM: Joseph Eisenhut, RMA/Planning

SUBJECT: Court Ordered Action Regarding General Plan

Attached you will find an addendum to the Ventura County General Plan's Goals, Policies and Programs document.

Please insert it into the document.

JE:nf/1B115-5.94

Attachment

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ADDENDUM
to the March 2, 1993 edition
of the
VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS

By order of Judge B. A. Lane, Ventura County Superior Court, on January 13, 1994, the policy indicated below is re-inserted into the subject document.

Page 14, add: Policy #1.3.2-6. All water dependant **development** shall have a dependable, long term (60 year minimum) water supply of adequate quantity and quality. Contingency plans for water shortages and drought, and 24 hour pump tests shall be required where necessary.

Existing policies #1.3.2-6 through #1.3.2-11 shall be renumbered respectively to #1.3.2-7 through #1.3.2-12.

JE:tm/1B110-1.94

County of Ventura

PLANNING DIVISION

MEMORANDUM

DATE: April 8, 1993

TO: Distribution List

FROM: Joseph Eisenhut, RMA/Planning, (805) 654-2464 JWE, 4-8-93

SUBJECT: GENERAL PLAN DOCUMENTS
REPLACEMENT PAGES AND DOCUMENTS

Attached you will find updated replacement pages for the following County General Plan documents:

1 - Hazards Appendix, (Board Adopted - 12/10/91);
2 - Oak Park Area Plan, (12/1/92);
3 - Goals, Policies and Programs, (3/2/93);
4 - Public Facilities and Services Appendix (3/2/93); and
5 - Lake Sherwood/Hidden Valley Area Plan (3/2/93).

Also attached are full copies of the following reformatted area plans that supersede all earlier editions:

1 - Piru Area Plan (Board Adopted - 11/17/92) and
2 - Saticoy Area Plan (12/1/92).

JE:ka/1C225-5.93

Attachment

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County of Ventura

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TO: Distribution List

FROM: Joseph Eisenhut, RMA/Planning (805) 654-2464 JME 2/26/93

SUBJECT: UPDATED COUNTY GENERAL PLAN

Attached you will find the following update material for the County's General Plan documents:

1. Page changes only for the Goals, Policies & Programs document reflecting changes approved by the Board of Supervisors on November 17, 1992 and December 1, 1992;

Sent to you with Full GP. mid FEB 93

2. Page changes only for the Thousand Oaks Area Plan reflecting changes approved by the Board of Supervisors on December 1, 1992; and

3. Page changes only for the Resources Appendix reflecting changes approved by the Board of Supervisors on December 10, 1991 and December 1, 1992.

Additional material (i.e., page changes for other General Plan documents and new documents), resulting from the above mentioned Board approvals will follow at a later date.

JE:j/1B138-5.93

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goals, policies and programs

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS

1988

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VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS

Adopted by the Ventura County Board of Supervisors - May 24, 1988

Amended - October 20, 1988

Amended - December 20, 1988

Amended - June 20, 1989

Amended - December 19, 1989

Amended - April 10, 1990

Amended - October 16, 1990

Amended - December 11, 1990

Amended - April 9, 1991

Amended - December 10, 1991

Amended - March 24, 1992

Amended - November 17, 1992

Amended - December 1, 1992

Amended - March 2, 1993

Amended - October 19, 1993

Addendum - January 13, 1994

Amended - June 7, 1994

Amended - July 12, 1994

Amended - December 20, 1994

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS

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EL RIO AREA PLAN
LAKE SHERWOOD/HIDDEN VALLEY AREA PLAN
NORTH VENTURA AVENUE AREA PLAN
OAK PARK AREA PLAN
OJAI VALLEY AREA PLAN
PIRU AREA PLAN
SATICOY AREA PLAN
THOUSAND OAKS AREA PLAN

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS

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INTRODUCTION

PURPOSE

Section 65300 of the California Government Code states; "Each planning agency shall prepare and the legislative body of each county and city shall adopt a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgment bears relation to its planning." Further, as stated in Section 65300.5 of the Government Code, it is the intent of the State Legislature "that the general plan and elements and parts thereof comprise an integrated, internally consistent and compatible statement of policies for the adopting agency."

The Ventura County General Plan is intended to fulfill these requirements of State Law.

FORM AND CONTENT

Section 65301 of the Government Code states:

> "(a) ...The general plan may be adopted in any format deemed appropriate or convenient by the legislative body, including the combining of elements. The legislative body may adopt all or part of a plan of another public agency in satisfaction of all or part of the requirements of Section 65302 if the plan of the other public agency is sufficiently detailed and its contents are appropriate, as determined by the legislative body, for the adopting city or county.
>
> (b) The general plan may be adopted as a single document or as a group of documents relating to subjects or geographic segments of the planning area.
>
> (c) The general plan shall address each of the elements specified in Section 65302 to the extent that the subject of the element exists in the planning area. The degree of specificity and level of detail of the discussion of each such element shall reflect local conditions and circumstances..."

Section 65302 of the Government Code states that "the general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals." The section then goes on to list seven mandated elements, and describes the purpose and content of each of the elements.

o TEXT

Ventura County has found that preparing a General Plan in the form of separate "elements" creates a General Plan which is disjointed, awkward to use, and redundant. Furthermore, much of the General Plan consists of background information and data which is necessary for the understanding of the subject matter and serves as justification for specific development policies, but is generally not needed for the day-to-day administration and implementation of the General Plan's development policies. Lastly, because Ventura County is so large and diverse, it is impossible to prepare a single, countywide General Plan of sufficient detail to cover all areas adequately.

Because of these concerns, Ventura County has formatted its General Plan in a manner which is clear, concise, logical and usable, while meeting the requirements of the Government Code. Specifically, the County General Plan consists of: (a) Countywide Goals, Policies and Programs containing four chapters (Resources, Hazards, Land Use, and Public Facilities and Services), (b) four Appendices (Resources, Hazards, Land Use, and Public Facilities and Services) which contain background information and data in support of the Countywide Goals, Policies and Programs, and (c) several Area Plans which contain specific goals, policies and programs for specific geographical areas of the County. The following table lists the seven mandated elements and the required content of each (as described in Section 65302 of the Government Code), and references which chapter of the Countywide Goals, Policies and

Programs and/or Appendix of the Ventura County General Plan where the requirements for each element can be found:

STATE REQUIREMENTS	VENTURA COUNTY GENERAL PLAN CHAPTER AND APPENDIX LOCATION			
	Resources	Hazards	Land Use	Public Facilities and Services
LAND USE ELEMENT				
Housing			X	
Business			X	
Industry			X	
Open Space	X	X	X	X
Agriculture	X			
Scenic Beauty	X			
Education				X
Public Buildings & Grounds				X
Solid & Liquid Wastes		X		X
Population Density/Building Intensity			X	
Flooding		X		X
Timberland Production	X		X	
CIRCULATION ELEMENT				
Major Thoroughfares				X
Transportation Routes				X
Terminals				X
Utilities				X
HOUSING ELEMENT			X	
CONSERVATION ELEMENT				
Water	X			X
Hydraulic Force		X		X
Forests	X			
Soils	X			
Rivers	X	X		X
Harbors				X
Fisheries	X			
Wildlife	X			
Minerals	X			
OPEN SPACE ELEMENT	X		X	
NOISE ELEMENT		X		
SAFETY ELEMENT		X		X

o MAPS

The Ventura County General Plan Goals, Policies and Programs contain four sets of maps which relate to specific policies; Resource Protection Maps, Hazard Protection Maps, General Land Use Maps and Public Facilities Maps. These map sets consist of the following 1" = 2000' scale quadrangle (quad) maps:

SOUTH HALF OF COUNTY

QUAD MAP NAME	RESOURCES PROTECTION MAPS	HAZARD PROTECTION MAPS	GENERAL LAND USE MAPS	PUBLIC FACILITIES MAPS
White Ledge Peak	o		o	o
Matilija	o	o	o	o
Ojai		o	o	o
Santa Paula Peak		o	o	o
Fillmore	o	o	o	o
Piru	o	o	o	o
Val Verde	o	o	o	o
Santa Susana	o		o	o
Simi	o	o	o	o
Moorpark	o	o	o	o
Santa Paula	o	o	o	o
Saticoy	o	o	o	o
Ventura	o	o	o	o
Pitas Point	o	o	o	o
Oxnard	o	o	o	o
Camarillo		o	o	o
Newbury Park	o	o	o	o
Thousand Oaks	o		o	o
Calabasas	o		o	
Point Dume	o		o	
Triunfo Pass	o		o	o
Point Mugu		o	o	o

o = Mapped Information Exists

NORTH HALF OF COUNTY

QUAD MAP NAME	RESOURCES PROTECTION MAPS	HAZARD PROTECTION MAPS	GENERAL LAND USE MAPS	PUBLIC FACILITIES MAPS
Old Man Mountain	o		o	
Wheeler Springs	o		o	o
Lion Canyon	o		o	o
Topa Topa Mountains			o	
Devil's Heart Peak			o	
Cobblestone Mountain	o		o	
Whitaker Peak	o		o	
Black Mountain			o	
McDonald Peak			o	
Lockwood Valley			o	o
San Guillermo			o	o
Reyes Peak	o		o	o
Rancho Nuevo Creek	o		o	o
Cuyama Peak	o		o	o
Apache Canyon			o	
Sawmill Mountain			o	
Cuddy Valley		o	o	o
Frazier Mountain			o	
Lebec			o	
Santiago Creek			o	
Ballinger Canyon			o	

o = Mapped Information Exists

A series of 22" x 36" display maps have been prepared for the North Half and South Half of the County which illustrate the information contained on each of the four quadrangle map sets discussed above. *These 22" x 36" maps are illustrative only and should not be used for policy interpretation or administration.*

In addition to the above maps, there are several maps within the text of the General Plan Goals, Policies and Programs which illustrate specific policies or depict important information. These maps are 8½" x 11" and are drawn at various scales.

Within the General Plan Appendices, there are several 8½" x 11" or 22" x 36" maps which are illustrative of information discussed within the text. The information depicted on these maps comes from a variety of different map sources which are drawn at various scales. *These maps are illustrative only and should not be used for policy interpretation or administration.*

Within the Area Plans, there are several maps, drawn at various scales, which depict information discussed within the text or illustrate specific policies within each Area Plan.

DETERMINING CONSISTENCY WITH THE GENERAL PLAN

Section 65860 of the Government Code states; "County or city zoning ordinances shall be consistent with the general plan of the county or city.... A zoning ordinance shall be consistent with a city or county general plan only if:

(i) the city or county has officially adopted such a plan, and (ii) the various land uses authorized by the ordinance are compatible with the objectives, policies, general land uses, and programs specified in such a plan."

Furthermore, Section 66473.5 of the Government Code states; "No local agency shall approve a tentative map, or a parcel map for which a tentative map was not required, unless the legislative body finds that the proposed subdivision, together with the provisions for its design and improvement, is consistent with the general plan. A proposed subdivision shall be consistent with a general plan or a specific plan only if the local agency has officially adopted such a plan and the proposed subdivision or land use is compatible with the objectives, policies, general land uses, and programs specified in such a plan."

Also, Section 65401 of the Government Code states that all proposed public works (facilities) of any county, city, special district or school district, shall be reviewed for consistency with the appropriate local city or county general plan. Furthermore, Section 65402(a) states that no real property shall be acquired for public purposes and no real property shall be disposed of, until the location, purpose and extent of such acquisition or disposition has been reviewed for conformity with the appropriate local city or county general plan. Section 65403(c) concludes by stating, "A district or local agency shall not carry out its capital improvement program or any part of the program if the planning agency finds that the capital improvement program is not consistent with the applicable general plan, any specific plans, and all elements and parts of the plan. A district or local agency may overrule the finding and carry out its capital improvement program."

Lastly, Section 65454 states; "No specific plan may be adopted or amended unless the proposed plan or amendment is consistent with the general plan."

At the local level, the Ventura County Zoning Ordinance states that no Planned Development Permit, Conditional Use Permit, or Zoning Clearance may be approved which is inconsistent with the County General Plan. Furthermore, the Ventura County Subdivision Ordinance states that no subdivision may be approved which is inconsistent with the County General Plan.

Hence, in the unincorporated area of Ventura County, zoning and any permits issued thereunder, any subdivision of land, any public works project, any public (County, Special District, or Local Government) land acquisition or disposition, and any specific plan, must be consistent with the Ventura County General Plan Goals, Policies and Programs, and where applicable, the adopted Area Plan.

INTERPRETATIONS

Although every effort has been made to provide goals, policies and programs which are clear, the necessity of interpreting such goals, policies and programs in light of specific and unusual cases will occur from time to time. When such interpretations are necessary, the Planning Director is responsible for the review and interpretation of the General Plan Goals, Policies and Programs (with right of appeal to the Planning Commission and the Board of Supervisors).

The goals, policies and programs of the General Plan are cumulative and, as such, individual goals, policies and programs should be used and interpreted in the context of all other goals, policies and programs. In the case of overlapping goals, policies and programs, the more specific and restrictive shall govern.

DEFINITIONS

Unless the provision(s) or context otherwise requires, the definitions of words and terms as found in the Glossary of the General Plan Goals, Policies and Programs govern the construction of the General Plan. The words shown in **boldface** in the body of the text are defined in the glossary.

The *goals*, *policies* and *programs* contained within the Ventura County General Plan express the intent of the Board of Supervisors regarding the protection and utilization of resources, protection from hazards, the distribution and extent of land uses, and the provision of public facilities and services for the unincorporated area of Ventura County. Goals, policies and programs are described as follows:

Goal The ultimate purpose of the County's effort stated in a way that is general in nature. Example: "Increase housing opportunities for persons of all income levels, with special emphasis on low and moderate income persons, including the elderly, single-headed households, large families, farmworkers, handicapped and homeless." The term "principle," which is referred to in State Law, is a goal for the purpose of this Plan. The term "objectives," which are referred to in State Law, are goals which are quantified. Example: "Strive to maintain at least a 2.54% vacancy rate in both rental and ownership housing Countywide."

Policy A specific statement guiding day-to-day actions and implying clear commitment to carry out the goals of the General Plan in a prescribed manner. Example: "The County shall give priority in providing housing assistance to those groups with demonstrated special needs such as the elderly, handicapped, large families, single-headed households, farmworkers and the homeless." The term "standards," which are referred to in State Law, are policies for purposes of this Plan.

Program A coordinated set of actions to carry out the goals of the Plan. Example: "The Areawide Housing Authority should continue the Section 8, Housing Assistance Payments Program to provide subsidies to eligible low income households." The term "plan proposals," which are referred to in State Law, are programs for purposes of this Plan.

GENERAL PLAN AMENDMENTS

According to Section 65358 of the Government Code:

"(a) If it deems it to be in the public interest, the legislative body (of a City or County) may amend all or part of an adopted general plan. An amendment to the general plan shall be initiated in the manner specified by the legislative body. A legislative body that permits persons to request an amendment of the general plan may require that an amount equal to the estimated cost of preparing the amendment be deposited with the planning agency prior to the preparation of the amendment.

(b) Except as otherwise provided in subdivision (c) or (d), no mandatory element of a general plan shall be amended more frequently than four times during any calendar year. Subject to that limitation, an amendment may be made at any time, as determined by the legislative body. Each amendment may include more than one change to the general plan.

(c) The limitation of the frequency of amendments to a general plan contained in subdivision (b) does not apply to amendments of the general plan requested and necessary for a single development of residential units, at least 25 percent of which will be occupied by or available to persons and families of low or moderate income, as defined by Section 50093 of the Health and Safety Code. The specified percentage of low- or moderate-income housing may be developed on the same site as the other residential units proposed for development, or on another site or sites encompassed by the general plan, in which case the combined total number of

residential units shall be considered a single development proposal for purposes of this section.

(d) This section does not apply to the adoption of any element of a general plan or to the amendment of any element of a general plan in order to comply with any of the following:

(1) A court decision made pursuant to Article 14 (commencing with Section 65750). [i.e. Challenges to Plan's validity]

(2) Subdivision (b) of Section 65302.3. [i.e. Airport Land Use Plan]

(3) Subdivision (d) of Section 56032 of the Health and Safety Code. [i.e. Large Scale Comprehensive Development Plan]

(4) Subdivision (b) of Section 30500 of the Public Resources Code. [i.e. Local Coastal Plan]"

Ventura County allows owners, lessees or buyers (in escrow) of land to make application for amendments to the Ventura County General Plan for land they own, lease or are buying. General Plan Amendment applications must contain all information required by the Planning Division and must be accompanied by all application processing fees/deposits as specified by the Board of Supervisors. Furthermore, all privately initiated General Plan Amendments are screened by the Board of Supervisors to determine if the amendment is appropriate for further processing.

According to Government Code Section 65588(b), "The Housing Element shall be revised as appropriate, but not less than every five years..." Except for the Housing Element, State Law does not establish a mandatory time schedule for comprehensive updates. According to the State General Plan Guidelines, "A jurisdiction is expected to make running changes to its General Plan as they are necessary. As a general rule, major General Plan revisions should occur at least every four to five years." With regard to the Ventura County General Plan, the Planning Division, with the support of other County agencies, is responsible for annually reviewing the General Plan and reporting to the Board of Supervisors on the status of the plan and progress in its implementation.

PLANNING HORIZON

The planning horizon for this General Plan is the year 2010.

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1. RESOURCES

This Chapter of the General Plan identifies goals, policies, and programs relating to the preservation, conservation, production and utilization of resources in Ventura County. The specific goals, policies, and programs are listed under the following major headings: General goals, policies and programs, Air Quality, Water Resources, Mineral Resources, Biological Resources, Farmland, Scenic Resources, Cultural Resources, Energy Resources, and Coastal Beaches and Sand Dunes.

1.1 GENERAL GOALS, POLICIES AND PROGRAMS

The following are the general goals, policies and program which apply to Resources:

1.1.1 *GOALS*

1. Inventory and monitor the natural and man-made (e.g., cultural) resources of Ventura County.

2. Plan for the **preservation, conservation**, efficient use of, enjoyment of, and **access to** resources, as appropriate, within Ventura County for present and future generations.

3. Identify and work with all entities responsible for the protection, management and enhancement of the County's resources.

1.1.2 *POLICIES*

1. All General Plan amendments, zone changes and **discretionary development** shall be evaluated for their individual and cumulative impacts on resources in compliance with the California Environmental Quality Act.

2. Significant adverse impacts on resources identified in environmental assessments and reports shall be mitigated to less than significant levels or, where no feasible mitigation measures are available, a statement of overriding considerations shall be adopted.

1.1.3 *PROGRAM*

The Planning Division, with the technical support of other appropriate agencies, will annually review the Resources Appendix to identify what information needs to be updated and, when appropriate, shall submit a budget request as part of the next year's County budget.

1.2 AIR QUALITY

The Federal government has established ambient air quality standards to protect public health (primary standards) and welfare (secondary standards). The State of California has established separate, more stringent standards. Federal and State standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (e.g. dust) and lead. In addition, California has standards for ethylene, hydrogen sulfide, sulfates and visibility-reducing particles.

Pollutant levels in Ventura County frequently exceed the national and state ambient air quality standards for ozone. Areas of the County south of the southern border of the Los Padres National Forest have been designated **nonattainment** for ozone by the Environmental Protection Agency. In addition to ozone, Ventura County has historically been classified as a **nonattainment** area for total suspended particulate (TSP) matter. On July 1, 1987, the Environmental Protection Agency (EPA) replaced the TSP standard with a new particulate standard known as PM10. PM10 includes only particulate matter 10 microns or less in diameter. These particles are of concern because they are small enough to penetrate the body's natural defense system and reach the deepest parts of the

lungs. Prior to the PM10 standard, much of southern Ventura County was classified as a **nonattainment** area for TSP. However, since replacement of the TSP standard, the TSP **nonattainment** designation is no longer applicable. Based on ambient monitoring data collected since 1985, the county is currently in attainment of the new federal PM10 standard of 150 ug/m^3 (150 micrograms per cubic meter) but is **nonattainment** for the State PM10 standard of 50 ug/m^3. Airborne concentrations of sulfur dioxide and carbon monoxide are well below the State and Federal standards throughout the County. Levels of sulfates, nitrogen dioxide and lead have not exceeded the standards for several years.

Ozone, the major constituent of smog, is formed through a complex series of chemical reactions involving reactive organic compounds, nitrogen oxides, and sunlight. In Ventura County, the primary sources of reactive organic compounds are motor vehicles (39%), the petroleum industry (13%), organic solvents (26%) and pesticides (12%). The primary sources of nitrogen oxides are motor vehicles (51%) and other combustion processes associated with the petroleum industry (9%) and power plants (16%). Particulate matter (PM10) arises from a wide variety of emission sources. Some are human-caused, created by construction, demolition, quarrying, and agricultural activities. Natural processes such as wind blown dirt, wildfires, and salt from sea spray also generate particulate matter. Aerosols are particles of sold or liquid formed in the atmosphere from precursor gases such as ROC, NOx, and sulfur dioxide.

Ventura County is composed of several inland valleys that open onto the Ventura coastal area and the Oxnard Plain. The combination of ozone precursor emissions (reactive organic compounds and nitrogen oxides), mountainous terrain, and the adjacent ocean produces conditions conducive to high ozone levels. The majority of ozone precursors are emitted in the coastal areas. These emissions are transported inland by the prevailing daytime westerly surface winds common during smog season (May-October), are compounded with inland emissions, and arrive in the inland valleys at peak sunlight hours.

Atmospheric inversions limit dispersion and dilution of air pollutants. Normally, air cools and disperses as it rises. However, under certain atmospheric conditions common during smog season, a layer of air fails to cool and disperse at the usual rate. Air rising from below cannot penetrate this layer, and it becomes trapped and stagnates. This condition is called an "inversion." Air pollutants can accumulate under the inversion unless the inversion breaks up, or winds are strong enough to disperse the pollutants horizontally. Inversions commonly occur 800-1,000 feet above sea level during smog season. Mountains also affect air quality in Ventura County by restricting the horizontal dispersion of air pollutants. Due to a combination of atmospheric inversions, westerly daytime winds, and mountainous terrain, air pollutants tend to accumulate in the inland valleys of Ventura County. The result is that the Ojai Valley, Piru and Simi Valley frequently have more days exceeding the National Ambient Air Quality Standards and corresponding State Standards for ozone than the coastal areas. Furthermore, peak ozone levels in these inland valleys tend to be higher than peak ozone in the coastal regions.

Ventura County's air quality is also affected by transport of pollutants from Santa Barbara County, the Santa Barbara Channel, and from the Los Angeles area. These pollutants can contribute significantly to the County's air quality problems.

The Ventura County Air Pollution Control Board (Board of Supervisors) adopted the 1987 Air Quality Management Plan (AQMP or Plan) in July 1988. Shortly after the 1987 AQMP was adopted, the California legislature passed the California Clean Air Act (CCAA). The CCAA requires all nonattainment areas in the state to develop new plans to meet federal and state air quality standards at the earliest practicable date. The CCAA divides nonattainment areas into three categories: moderate, serious, and severe, depending on ambient air quality levels, with requirements that are progressively more stringent. Although not yet officially designated, Ventura County will be designated as a "severe" nonattainment area for ozone, and have to meet the most rigorous requirements of the CCAA. The official designation, made by the California Air Resources Board (ARB), will not occur until the initial CCAA Plans are submitted to the ARB. The 1991 AQMP meets the initial planning requirements of the CCAA and continue the trend toward clean

air. Despite having put many strict controls into place, sizable reductions in emissions must still occur to meet all clean air standards. The 1991 AQMP proposes a control strategy representing the full implementation of known technology to reduce ozone-forming emissions. This strategy concentrates on concurrent reductions of reactive organic compounds (ROC) and nitrogen oxides (NOx), the two precursors to ozone. Further, discussion of air pollution and measures being undertaken to achieve air quality standards can be found in the Air Quality Management Plan, which is available for review at the Air Pollution Control District office, 702 County Square Drive, Ventura, California.

The goals, policies and programs which apply to air quality are as follows:

1.2.1 *GOALS*

1. Diligently seek and promote a level of air quality that protects public health, safety, and welfare, and seek to attain and maintain the State and Federal Ambient Air Quality standards.

2. Ensure that any adverse air quality impacts, both long-term and short-term, resulting from **discretionary development** are mitigated the maximum extent feasible.

1.2.2 *POLICIES*

1. **Discretionary development** that is inconsistent with the Air Quality Management Plan (AQMP) shall be prohibited, unless overriding considerations are cited by the decision-making body.

2. The air quality impacts of **discretionary development** shall be evaluated by use of the Guidelines for the Preparation of Air Quality Impact Analysis.

3. **Discretionary development** that would have a significant adverse air quality impact shall only be approved if it is conditioned with all reasonable mitigation measures to avoid, minimize or compensate (offset) for the air quality impact. Developers shall be encouraged to employ innovative methods and technologies to minimize air pollution impacts.

4. Where deemed necessary by the APCD, **discretionary development** shall be conditioned to develop, implement, and maintain over time, Transportation Demand Management (TDM) programs consistent with APCD's trip reduction rule 210. TDM programs shall include a requirement for annual performance reporting to and approval by the APCD.

5. **Development** subject to APCD permit authority shall comply with all applicable APCD rules and permit requirements, including the use of best available control technology (BACT) as determined by the APCD.

1.2.3 *PROGRAMS*

1. The Ventura County Air Pollution Control District (APCD) will periodically update the Ventura County Air Quality Management Plan per the requirements of the Federal Clean Air Act and the California Clean Air Act.

2. The APCD will require employers subject to APCD's Trip Reduction Rule 210 to prepare and implement trip reduction plans. The purpose of these plans is to reduce the number of solo drivers commuting to work. Trip reduction strategies may include, but are not limited to, ridesharing promotion, modified work schedules, preferential parking, telecommuting, parking management and van pools. The APCD will continue to be involved with the annual review of the Congestion Management Program and has State mandated responsibility regarding review of deficiency plans.

3. The APCD will continue the program to assist cities in the development and implementation of local Transportation Control Measure (TCM) policies and programs. The assistance program shall include, but not be limited to, periodic meetings to facilitate coordination of efforts between local jurisdictions.

4. The County Air Pollution Control District will continue to monitor and comment on **discretionary development** requests under City, State and/or Federal jurisdiction, to help ensure that they do not significantly impact air quality in Ventura County.

5. The Planning Division and the Public Works Agency will submit, for Board budget consideration, **programs** to implement Transportation Control Measures as outlined in the AQMP.

1.3 WATER RESOURCES

There are three local water sources in the County; groundwater, surface water and reclaimed water. Imported water, which is not considered an in-County water resource, is discussed in the Water Supply Facilities Section (#4.3).

Groundwater is the single most important source of water in the County. In 1985, it provided about 67% of the water utilized in the County. It is pumped extensively by individual well owners as well as purveyors who sell it at either retail sales to individuals or at wholesale to other purveyors. Since, overall, more groundwater is used than is replaced, the County's groundwater reserves are slowly decreasing (i.e., water is being extracted more rapidly than it is being replaced).

The largest groundwater supplies in the County are contained within major aquifers which underlie most of the Oxnard Plain, and the Las Posas and Santa Clara Valleys. These are, in order of increasing depth, the Oxnard, Mugu, Hueneme, Fox Canyon, and Grimes Canyon aquifer zones. Both the Oxnard aquifer in the Oxnard Plain area and the Fox Canyon aquifer are being overdrafted. Long term overdrafting has caused serious seawater intrusion of the Oxnard aquifer. A Seawater Intrusion Abatement Project is currently underway to remedy this problem. The United Water Conservation District and County, with the support of local cities, are carrying out this project which includes removal of wells from the intruded Oxnard aquifer and operation of the Freeman diversion structure on the Santa Clara River which, together with new wells in the Fox Canyon zone and the new pumping trough pipeline, will deliver water to users on the Oxnard Plan.

Surface water resources in Ventura County are divided into two major hydrologic units (Ventura River and Santa Clara-Calleguas Units) and into four other smaller hydrologic units (Rincon Creek, Cuyama, San Joaquin, and Malibu Hydrologic Units).

Streams in Ventura County that generally flow for the entire year include Sespe Creek, Piru Creek, Reyes Creek, Matilija Creek, the North Fork of the Ventura River, the Ventura River below Foster Park and the upper portion of the Santa Clara River. However, the year-round flow in the Ventura below Foster Park, the upper reach of the Santa Clara River and the Arroyo Simi are due primarily to waste water treatment plant discharges. These creeks plus other, small tributaries have extensive riparian zones and provide habitat for a variety of vertebrates such as rainbow trout.

The Casitas Municipal Water District provides wholesale and retail water distribution from Lake Casitas. The United Water Conservation District is responsible for groundwater recharge throughout most of the Santa Clara River Valley and for the wholesale distribution of water to purveyors on the Oxnard plain. Lake Piru is United's reservoir for water which is released into the Santa Clara River for subsequent recharge into the underground aquifers for later urban and agricultural use. The Calleguas Municipal Water District is responsible for providing imported water for wholesale purposes to retail water purveyors serving municipal/industrial customers in the southeastern portions of the County.

Groundwater quality in Ventura County is gradually being degraded; primarily by agricultural runoff and **leachate**. Water quality can be estimated through the concentration of total dissolved solids (TDS). This value represents the concentration of all minerals and trace elements. Separate standards for individual pollutants also apply.

Improperly designed, installed and maintained septic systems could potentially contaminate groundwater and surface water supplies in some areas of the County. Also, industrial and commercial developments on septic systems could potentially lead to degradation of groundwater supplies from intentional or unintentional discharges of hazardous wastes into these systems. This potential problem is more critical in aquifer recharge areas.

The best quality water is in portions of the Fox and Grimes Canyon aquifer zones, while the worst is in the upper aquifers along the edges of the Santa Clara Valley and in seawater intruded portions of the Oxnard aquifer zone. Water quality of the major reservoirs (Lake Casitas and Lake Piru) has remained constant and is generally of high quality. Surface water quality such as rivers and tributaries fluctuates from season to season, but is adequate in most areas for agricultural uses.

The Countywide Wastewater Reuse (201) Plan identifies reclaimed water from **sewage treatment facilities** as being a potential source of 18,000 acre feet/year. The County is pursuing funding to implement this plan.

There are many agencies that are responsible for the management of water resources at the Federal, State and local levels. Federal agencies include the Forest Service, Army Corps of Engineers, Bureau of Reclamation and the Environmental Protection Agency; State agencies include the Resources Agency and its many departments, the State Department of Public Health, Department of Water Resources and the Water Resources Control Board; and local agencies include the County Departments of Public Works, Environmental Health, Planning, Flood Control Districts, Sanitation Districts, Fox Canyon Groundwater Management Agency, cities, and water retailers and wholesalers.

The goals, policies, and programs which apply to water resources are as follows:

1.3.1 *GOALS*

1. Inventory and monitor the quantity and quality of the County's water resources.

2. Effectively manage the water resources of the County by adequately planning for the development, **conservation** and protection of water resources for present and future generations.

3. Maintain and, where feasible, restore the chemical, physical and biological integrity of surface and groundwater resources.

4. Ensure that the demand for water does not exceed available water resources.

5. Protect and, where feasible, enhance watersheds and aquifer recharge areas.

6. Promote reclamation and reuse of wastewater for recreation, irrigation and to recharge aquifers.

7. Promote efficient use of water resources through water conservation.

1.3.2 *POLICIES*

1. **Discretionary development** which is inconsistent with the goals and policies of the County's Water Quality Management Plan (WQMP) shall be prohibited, unless overriding considerations are cited by the decision-making body.

2. **Discretionary development** shall comply with all applicable County and State water regulations.

3. The installation of **on-site septic systems** shall meet all applicable State and County regulations.

4. **Discretionary development** shall not significantly impact the quantity or quality of water resources within watersheds groundwater recharge areas or groundwater basins.

5. Landscape plans for **discretionary development** shall incorporate water conservation measures as prescribed by the County's Guide to Landscape Plans, including use of low water usage landscape plants and irrigation systems and/or low water usage plumbing fixtures and other measures designed to reduce water usage.

6. The use of the Santa Clara River as a multiple resource (i.e., source of supply for water, concrete aggregates and biological habitat) shall be permitted to continue; with the use of the River as a water resource having priority over all other uses.

7. Out-of-river mining in the Del Norte/El Rio (Oxnard Plain Forebay Basin) area shall be above the historic or predicted future high groundwater level. This policy will be reexamined when supplies of aggregate become limited or when an alternate excavation threshold is established.

8. All **discretionary development** shall be conditioned for the proper drilling and construction of new oil, gas and water wells and destruction of all abandoned wells on-site.

9. The County Public Works Agency shall continue to enforce Chapter 70 (Excavation and Grading) of the Uniform Building Code, as incorporated by reference in and amended by the Ventura County Building Code, to ensure that any proposed grading in a waterway or wetland is adequately investigated and that any **development** incorporates appropriate design provisions to protect waterways or wetlands.

10. New wells in the Oxnard Plain pressure basin shall not be allowed if they would increase seawater intrusion in the Oxnard or Mugu aquifers.

11. All new golf courses shall be conditioned to prohibit landscape irrigation with water from groundwater basins or inland surface waters identified as Municipal and Domestic Supply or Agricultural Supply in the California Regional Water Quality Control Board's Water Quality Control Plan unless either: a) the existing and planned water supplies for a Hydrologic Area, including interrelated Hydrologic Areas and Subareas, are shown to be adequate to meet the projected demands for existing uses as well as reasonably foreseeable probable future uses within the area, or b) it is demonstrated that the total water consumption for the golf course will be substantially less than the historic water consumption for the site. Where feasible, reclaimed water shall be utilized for new golf courses.

1.3.3 ***PROGRAMS***

1. The United Water Conservation District and the County will continue to support the Seawater Intrusion Abatement Project.

2. The County and the major water wholesales and purveyors should jointly support the Ventura County Water Conservation Program, Participation in the countywide Program includes funding the position of water conservation coordinator and water conservation assistant. Programs promote water efficiency in urban, agricultural and business and industrial areas. Activities include staffing the Water

Conservation Landscape Task Force Committee, updating annual water use information, publishing newsletters and brochures, coordinating commercial and industrial water efficiency programs and informing the public about water conservation.

3. The County will continue to support the Fox Canyon Groundwater Management Agency Plan for both the Upper and Lower Aquifer Systems.

4. The County Environmental Health Division will take all administrative, fiscal and legal measures necessary to provide the services of County Service Area 32.

5. The Public Works Agency, with the support of the Planning Division, will periodically update the County Water Quality Management Plan as necessary. This update will evaluate the water quality impact of agricultural and urban runoff and **leachate** as well as other water related issues, and will incorporate all feasible mitigation measures. The update will comply with the 1987 Clean Water Act.

6. The Planning Division and Public Works Agency will continue to coordinate with water districts and other appropriate agencies to establish a data base on actual available supply, projected use factors for types of land use and **development**, and threshold limits for **development** within available water resources.

7. The Planning Division will continue to promote the efficient use of water through the Landscape Design Criteria Program and the Government, Utilities and Private Industry (GUPI) Program.

8. The Public Works Agency in cooperation with the Environmental Health Division, will continue to pursue the use of reclaimed water for agricultural irrigation.

9. The Environmental Health Division will continue to monitor, inspect and regulate underground storage tanks.

10. The Environmental Health Division will continue to identify **waste disposal sites** and seek to mitigate impacts to water resources.

1.4 MINERAL RESOURCES

The two principal mineral resources located in Ventura County and inventoried in the Resources Appendix are petroleum (oil and gas) and aggregate (principally sand and gravel). Other minerals of commercial value within Ventura County are: asphalt, clay, expansible shale, gypsum, limestone, and phosphate.

In terms of gross dollars, petroleum production accounted for approximately 75% of the total mineral production of Ventura County. Ventura County produced 15,659,398 barrels of oil and 16,130,168 million cubic feet (mcf) of natural gas in 1987 [excluding Outer Continental Shelf (OCS) production]. This was the third highest production total among California counties (only Kern and Orange counties produced more). The petroleum resource areas identified in Figure 1.4.7 of the Resources Appendix are derived from maps prepared by the State Division of Oil and Gas which depict the boundaries of known petroleum fields.

Aggregates represent the other significant type of mineral resource extracted within the County. Aggregates include sand, gravel and rock which are used for fill, construction-grade concrete and riprap, among others. Although many sand and gravel sites exist throughout the County, most of the extraction sites are located in and along the Santa Clara River bed. Transportation, being a major cost in this industry, dictates that extraction sites be in close proximity to areas of use and demand. For this reason, it is important to utilize close-in aggregate resources before urbanization precludes their extraction.

River **mining** standards in the Santa Clara River currently include: depth/profile standards, establishment of a river corridor, slope and setback restrictions, buffer zones, and protection measures for fish and riparian habitats. The

objective of the depth/profile standards are to stabilize the riverbed of the Santa Clara River, thus protecting major structures, and promoting downstream transport of sediment from the upper reaches of the river to the degraded lower reaches of the river.

The aggregate resource areas (see the Resources Appendix) are based on Mineral Resource Zone maps developed by the State Division of Mines and Geology. These maps were prepared in response to the Surface Mining and Reclamation Act of 1975 (SMARA). This Act mandated that aggregate resources throughout the State be mapped so that local governments could make land use decisions in light of the presence of the resources and the need to preserve access to them. SMARA's basic objectives are to ensure proper reclamation of mineral land and safeguard access to mineral resources of regional and statewide significance in the face of competing land uses and urban expansion. Its initial focus was on aggregate necessary for construction grade concrete.

The County's mechanism for carrying out SMARA's objective of safeguarding access to mineral resources is the designation of appropriate areas as a Mineral Resource Area on the Resource Protection Maps. These designated areas are then made subject to the Mineral Resource Protection Overlay Zone (see Zoning Ordinance). In order to be so designated, an area must meet the criteria listed in this section, not be committed to alternative uses, nor be within a city's viewshed.

The goals, policies and programs which apply to mineral resources are as follows:

1.4.1 ***GOALS***

1. Manage mineral resources in a manner which effectively plans for the access to, development and conservation of mineral resources for existing and future generations.

2. Identify and manage mineral resources in order to:

   - Safeguard future access to the resource.
   - Facilitate a long-term supply of mineral resources within the County.
   - Minimize incompatibility between the extraction and production of the resource and neighboring land uses and the environment.
   - Provide notice to landowners and the general public of the presence of significant mineral resource deposits.

3. Promote the utilization of mineral resources located close to urbanized areas before their extraction is precluded by urbanization.

4. Ensure that all mineral extractions are conducted in a manner which protects the environment and the public's health, safety and welfare.

1.4.2 ***POLICIES***

1. Applications for the extraction of mineral resources shall be reviewed to assure minimal disturbance to the environment and to assure that lands are reclaimed for appropriate uses which provide for and protect the public health, safety and welfare.

2. **Discretionary development** within a Mineral Resource Area (see Resource Protection Map) shall be subject to the provisions of the Mineral Resource Protection (MRP) Overlay Zone, and is prohibited if the use will significantly hamper or preclude access to or the extraction of mineral resources.

3. Mineral Resource Areas may be established in whole or part, in accordance with the following criteria:

- Any area designated by the State Board of Mines and Geology as an area of statewide or regional significance pursuant to the provisions of the Surface Mining and Reclamation Act of 1975.

- Any area covered by a **discretionary permit** (e.g. CUP) for mining of aggregate minerals determined to be of Statewide or regional significance.

4. The County is not obligated to approve **discretionary entitlements** for the development of mineral resources located in a Mineral Resource Area nor is it the County's intent to preclude mineral resource development from occurring outside of Mineral Resource Areas as identified on the Resource Protection Map (Figure 1).

5. **Mining** operations shall comply with the requirements of the County Zoning Ordinance and standard conditions, and State laws and guidelines relating to mining and reclamation.

6. All **discretionary permits** for in-river **mining** shall be conditioned to incorporate all feasible measures to mitigate flooding and erosion impacts as well as impacts to water resources, biological resources, and beach sediment transport.

7. All General Plan amendments, zone changes, and discretionary developments shall be evaluated for their individual and cumulative impacts on access to and extraction of recognized mineral resources, in compliance with the California Environmental Quality Act.

8. Significant adverse impacts on the access to and extraction of recognized mineral resources which are identified in environmental assessments and reports shall be mitigated to less than significant levels or, where no feasible mitigation measures are available, a statement of overriding considerations shall be adopted. It is not the County's intent to preclude property owners and mineral rights owners and/or lessees from negotiating mutually satisfactory mitigation measures, such as, but not limited to, surface leases, access points and associated improvements.

9. Petroleum exploration and production shall comply with the requirements of the County Zoning Ordinance and standard conditions, and State laws and guidelines relating to oil and gas exploration and production.

10. As existing petroleum permits are modified, they shall be conditioned so that production will be subject to appropriate environmental and jurisdictional review.

1.4.3 *PROGRAMS*

1. As new information regarding mineral resources is received from authoritative sources, the Planning Division will update the Mineral Resources Section of the County General Plan, where appropriate.

2. The Planning Division will continue to check for the existence of abandoned oil and gas wells on parcels of land before **development** occurs, with the highest priority being in those areas where there are existing or historic oil fields.

3. The Planning Division will continue the Oil Enforcement Program to ensure compliance with the requirements of the Zoning Ordinance and conditions of **discretionary permits**.

4. The Planning Division will prepare, and update as necessary, maps and other data indicating oil and gas reserves and production areas.

1.5 BIOLOGICAL RESOURCES

Biological resources include plant and animal species and their habitats, plant communities and ecosystems.

VEGETATION

The diverse topography and climate of Ventura County provide an environment where a range of vegetation communities (from Coastal sage-scrub to subalpine forest, from desert chaparral to riparian woodland) can maintain successful populations. Native vegetation in Ventura County can be categorized into seven general plant communities: grasslands, coastal sage-scrub, chaparral, oak woodland, riparian, pinyon-juniper, and timber-conifer (see Resources Appendix).

Most native vegetation in the north half of the County has been preserved as a result of the low level of development in this area (outside of Lockwood Valley). The exceptions are the large expanses of native grasslands that were eliminated by cattle ranching operations several decades ago. Development in the Lockwood Valley area has impacted the pinyon-juniper community; however, the higher elevations surrounding the valley contain nearly undisturbed stands of timber-conifer vegetation.

A large portion of the native vegetation in the south half of the County has been displaced as a result of urban and agricultural development. For the most part, this development is confined to the fertile valleys and plains, and along the coastline. Consequently, most of the mountainous areas in the south half still support significant native plant communities.

Chaparral is the most common plant community in the County. This community consists of woody shrubs and herbaceous plants, is generally located on steep slopes with rocky or heavy soils, and is characteristically dense and subject to fires. Large expanses of chaparral are found in the Santa Monica Mountains.

The Coastal sage-scrub community is located below the chaparral community, generally below 3000 feet, on dry, rocky slopes. It consists of woody shrubs, and is a more open community than the Chaparral. Substantial areas of this community remain on South Mountain and in the Simi Hills and Santa Susana Knolls areas; however, these populations are threatened by encroaching residential development.

Grassland vegetation is not common, and as groundcover, is usually associated with oak-woodland or open areas. The La Jolla Valley in Point Mugu State Park is the only area in the County that still contains native bunch grasses in pure stands, and is considered a locally unique habitat.

The oak woodland community in Ventura County contains the easily identifiable valley oaks, with trees 20 to 60 feet tall and grassland and soft shrubs as groundcover, as found in the Thousand Oaks, Lake Casitas, and Hidden Valley areas. A large area of foothill oak woodland is found on Sulphur Mountain.

Riparian vegetation is found in **wetlands** along most of the permanent and ephemeral streams within the County. Typical trees of this community include sycamores, willows, cottonwoods, and alders. Extensive riparian growth now lines Piru, Sespe, and Santa Paula Creeks, and the Santa Clara and Ventura Rivers. These riparian areas provide both essential habitat and migration corridors for wildlife in Ventura County.

FISH AND WILDLIFE

The naturally vegetated areas of the County provide shelter, food, and nesting areas to create habitats for a wide variety of animal species. Each plant community has different characteristics which support different species of wildlife, although an animal species may use various habitats at different times of the year or at various stages in the animal's life cycle.

The low-elevation, drier plant communities, such as the grasslands, coastal sage-scrub, and chaparral, support a wildlife population which includes rodents,

insectivorous, hares, fox, coyotes, raptors (such as hawks, falcon, owls, and eagles) and numerous perching birds, from hummingbirds to ravens. The upland plant communities, such as the oak woodlands, pinyon-juniper, and timber-conifer, provide habitats for larger animals, and include populations of bobcat and mountain lion, mule deer, and black bear, in addition to a game population of quail, rabbit, tree squirrel, band-tailed pigeon, dove, turkey, and chukar (partridge). Reptiles are commonly found throughout the County.

Several hundred species of vertebrates find permanent and transitory range in the varied habitats and topography of the Los Padres National Forest. These species are listed in the U.S. Forest Service Wildlife Survey of 1982. The number of individuals of many of these species is below optimum replacement levels, a result of the declining quality of habitats and deficient vegetation management.

Riparian areas support a great intensity and diversity of species. These species include the bank swallow, western yellow-billed cuckoo, southern rubber boa, and migratory waterfowl. Populations of these species have greatly diminished as a result of human intrusion and degradation of their habitats.

LOCALLY UNIQUE HABITATS

Ventura County contains several unique habitats that support a variety of plants and animals found nowhere else in the Country.

The coastal wetlands and lagoons found along the south coast of the County provide shelter, forage, and nesting areas for thousands of birds, fish, mollusks, crabs, seals, and many other marine organisms and plants. The wetland area with the richest diversity is the Mugu Lagoon, which shelters the remnants of many plant, bird, fish, and insect populations which once inhabited the coast from the Ventura River to the Santa Monica Mountains. Other wetlands include the McGrath Lake and Ormond Beach areas, and the mouths of the Ventura and Santa Clara Rivers. These areas are considered significant biological resources.

Ventura County also has two large areas set aside as sanctuaries for the California condor. Although there are (as of 1986) no longer any of these birds living in the wild, the U.S. Fish and Wildlife Service remains hopeful that its Condor Recovery program, involving captive breeding and eventual release, will again allow the condor to safely exist and repopulate in Southern California. As a result, both Matilija and Sespe Condor Sanctuaries remain as significant biological habitats, as shown on the Biological Resources map in the Resources Appendix.

The Hopper Mountain National Wildlife Refuge is just outside of the Los Padres National Forest, east and south of, and adjacent to, the Sespe Condor Sanctuary. It is a traditional feeding site for the California condor, and is currently operated as a cattle ranch. In addition, a variety of raptors, including prairie falcons, and red-tailed and Cooper's hawks, populate this area.

The Sespe Creek is designated as a "Wild Trout Stream" by the State of California. The steelhead trout, an anadromous fish, uses this stream as its spawning area. The Pacific lamprey, an anadromous fish, also uses the Sespe Creek and the Santa Clara River for its spawning area. The creek also supports a significant population of rainbow trout, cousin to the steelhead. The "Wild Trout Stream" designation affords some protection of water flows and riparian vegetation, both threatened by water development projects. In addition, the Forest Service has proposed that a 28½ mile portion of Sespe Creek receive a "Wild and Scenic River" designation. The Sespe is also mapped as a significant biological resource.

ENDANGERED, THREATENED AND RARE SPECIES

Ventura County is host to numerous species of plants and animals that are **endangered, threatened, rare,** or considered to be a **candidate** for one of those designations. A full listing of these species, with their State and Federal designations, and a general description of their locations is found in the Resources Appendix. The areas where these species are located are also designated on the Significant Biological Resources Map in the Resources Appendix.

Although fish and wildlife are generally renewable resources, the rates of renewal are usually very slow and are often impeded by the disruptive forces or urbanization, human harassment, predator control, and pollution. The species and ecosystems in this County are of aesthetic, ecological, educational, historic, recreational and scientific value to the people of Ventura County and the nation as a whole.

The goal, policies and programs which apply to biological resources are as follows:

1.5.1 *GOAL*

Preserve and protect significant biological resources in Ventura County from incompatible land uses and development. Significant biological resources include **endangered, threatened** or **rare species** and their habitats, **wetland habitats, coastal habitats, wildlife migration corridors** and **locally important species/communities.**

1.5.2 *POLICIES*

1. **Discretionary development** which could potentially impact **biological resources** shall be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures.

2. **Discretionary development** shall be sited and designed to incorporate all feasible measures to mitigate any significant impacts to **biological resources.** If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body.

3. **Discretionary development** that is proposed to be located within 300 feet of a marsh, small wash, intermittent lake, intermittent stream, spring, or perennial stream (as identified on the latest USGS 7½ minute quad map), shall be evaluated by a County approved biologist for potential impacts on **wetland** habitats. **Discretionary development** that would have a significant impact on significant **wetland** habitats shall be prohibited, unless mitigation measures are adopted that would reduce the impact to a less than significant level; or for lands designated "Urban" or "Existing Community", a statement of overriding considerations is adopted by the decision-making body.

4. Discretionary development shall be sited a minimum of 100 feet from significant **wetland** habitats to mitigate the potential impacts on said habitats. Buffer areas may be increased or decreased upon evaluation and recommendation by a qualified biologist and approval by the decision-making body. Factors to be used in determining adjustment of the 100 foot buffer include soil type, slope stability, drainage patterns, presence or absence of endangered, threatened or rare plants or animals, and compatibility of the proposed development with the wildlife use of the wetland habitat area. The requirement of a buffer (setback) shall not preclude the use of replacement as a mitigation when there is no other feasible alternative to allowing a permitted use, and if the replacement results in no net loss of wetland habitat. Such replacement shall be "in kind" (i.e. same type and acreage), and provide wetland habitat of comparable biological value. On-site replacement shall be preferred wherever possible. The replacement plan shall be developed in consultation with California Department of Fish and Game.

5. The California Department of Fish and Game, the U.S. Fish and Wildlife Service, National Audubon Society and the California Native Plant Society shall be consulted when **discretionary development** may affect significant **biological resources.** The National Park Service shall also be consulted regarding **discretionary development** within the Santa Monica Mountains or Oak Park Area.

1.5.3 *PROGRAMS*

1. The Planning Division, in conjunction with State and Federal agencies, will identify those areas of the County that are considered to be critical habitats of **endangered, threatened** or **rare** species as well as for other significant **biological resources.**

2. The Planning Division will retain a list of qualified biological consultants for the purpose of providing information to complete Initial Studies and Environmental Impact Reports.

3. The Fire Protection District, in conjunction with the U.S. Forest Service, will, under the California Vegetation Management Program, continue the use of prescribed burning to mimic the effects of natural fires in order to reduce the **fire hazard** to human residents and to enhance the health of biotic communities.

4. The Planning Division shall prepare a program proposal, for Board of Supervisors' consideration, to map significant **wetland** habitat areas and amend the General Plan and Zoning Ordinance in order to establish a Biological Resource Protection Overlay designation/zone which would require all development in said overlay areas to be evaluated for impacts on significant wetland habitat areas.

1.6 FARMLAND RESOURCES

Agriculture plays an important role in the National, State, and County economy. Ventura County is one of the principal agricultural counties in the State, ranking tenth in 1987, with a total income of over 610 million dollars and ranked seventeenth in farm earnings out of 3,175 counties nationally.

This high productivity is made possible by the County's abundance of the natural resources required for agricultural production; primarily soils, water, climate and topography.

The first step in evaluating and preserving farmland is to inventory existing resources. For inventorying County farmlands, the Federal Important Farmlands Inventory (IFI) system is used. This system generally evaluates farmland in light of its productive capabilities rather than the mere presence of ideal soil conditions. The system effectively recognizes a great deal of land in California and Ventura County which would not ordinarily be classified as "prime" under the old evaluation system, but which is, nevertheless, among the most productive land in the country.

The Important Farmland Inventory uses five classifications: **Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance,** and **Grazing Land.** The minimum mapping unit is 10 acres, except for Grazing Land which is 40 acres. Areas smaller than the minimum mapping unit are not considered as agricultural land.

Prime Farmland and Farmland of Statewide Importance were identified by the Department of Conservation in cooperation with the United States Department of Agriculture Soil Conservation Service. Both Unique Farmland and Farmland of Local Importance are identified by local advisory committees composed of members of the agricultural community, citizens groups, and concerned public agencies. (For a map of Important Farmlands Inventory, refer to Resources Appendix.)

Erosion of soil is a problem in much of the County. This erosion problem is closely correlated with steep slopes or areas subject to flooding. Agricultural development on hillsides has caused erosion and the subsequent siltation.

The County has adopted a number of programs designed to preserve farmland. These programs include:

- The Agricultural land use designation (see Land Use Chapter), which established a forty acre minimum parcel size and A-E zoning;

- Participation in **Greenbelt Agreements** and the **Guidelines for Orderly Development** with the cities which seek to prevent urban encroachment into agricultural areas (see Land Use Chapter).

- Widespread use of Land Conservation Act Contracts to provide tax rate reductions as an incentive for maintaining agriculture.

- Participation in numerous water resource development and conservation programs to ensure long-term availability of water for agriculture.

The goals, policies, and programs which apply to farmland are as follows:

1.6.1 *GOALS*

1. Preserve and protect irrigated agricultural lands as a nonrenewable resource to assure the continued availability of such lands for the production of food, fiber and ornamentals.

2. Encourage the continuation and development of facilities and programs that enhance the marketing of County grown agricultural products.

1.6.2 *POLICIES*

1. **Discretionary development** located on land designated as Agricultural (see Land Use Chapter) and identified as **Prime Farmland** or **Farmland of Statewide Importance** on the State's Important Farmland Inventory, shall be planned and designed to remove as little land as possible from potential agricultural production and to minimize impacts on topsoil.

2. Hillside agricultural grading shall be regulated by the Public Works Agency through the Hillside Erosion Control Ordinance.

3. Land Conservation Act (LCA) Contracts shall be encouraged on irrigated farmlands.

4. The Public Works Agency shall plan transportation capital improvements so as to mitigate impacts to important farmlands to the extent feasible.

5. The County shall preserve agricultural land by retaining and expanding the existing **Greenbelt Agreements** and encouraging the formation of additional **Greenbelt Agreements.**

6. **Discretionary development** adjacent to Agricultural-designated lands shall not conflict with agricultural use of those lands.

1.6.3 *PROGRAMS*

1. The Planning Division, in conjunction with the Agricultural Commissioner, Farm Advisor, Agricultural Advisory Committee and Assessor's Office, will administer, periodically review, and update as necessary the County's Land Conservation Act Guidelines and standard contract language.

2. The Planning Division, in conjunction with the Agricultural Commissioner, Farm Advisor and Agricultural Advisory Committee, will develop and implement standards governing **development** adjacent to agricultural uses. The standards should address fencing and spray buffers between agricultural areas and residences, off-site flood control measures, siltation control from grading operations and the development of a standard County-imposed entitlement condition which notifies new property owners of County and State laws protecting agricultural operations. After the development of standards, they could be added as **policies** into the General Plan to guide future land use decisions.

3. The Planning Division will continue to work with State and Federal agencies to periodically update the Important Farmlands Inventory Map to reflect current conditions.

4. The Planning Division will prepare an annual status report on Land Conservation Act Contracts (LCA), agricultural acreage, and other agriculture related information.

1.7 SCENIC RESOURCES

The visual beauty and aesthetic quality of the natural landscape in Ventura County is perhaps one of its most significant resources. The scenic resources of Ventura County, especially the coastline, within the **viewshed** of the County's lakes, and along designated State and County Scenic Highways, are of considerable value both in providing a pleasurable environment for local citizens and in stimulating tourism. Coastline resources are discussed in the Coastal Area Plan, and lake resources and scenic highways are discussed in the Resources Appendix.

The County's natural visual resources are largely composed of the varied topography, exposed geological formations, heterogeneous vegetation, beaches and waterways. The man-made environment of parks, golf courses, harbors, public buildings, and major commercial, industrial, and residential developments can also contribute to, or detract from, scenic resource quality.

Conservation of scenic resources is most critical where the resources will be frequently and readily viewed, as from a highway, or where the resource is particularly unique. Ventura County has identified the **viewsheds** of lakes and other scenic areas as may be identified by an area plan, as being worthy of special protection via identification as **Scenic Resource Areas** on the Resource Protection Map (Figure 1).

The Resources Appendix describes the provisions of the State Scenic Highway Law for the regulation of land uses within the **viewshed** of a State Scenic Highway. The entire length of Highway 33 from milepost 17.5 to the Santa Barbara County line has been designated as a State Scenic Highway, and is identified as a **Scenic Highway Area** on the Resource Protection Map (Figure 1).

The goals, policies and programs which apply to scenic resources include:

1.7.1 *GOALS*

1. Preserve and protect the significant open views and visual resources of the County.

2. Protect the visual resources within the **viewshed** of designated scenic highways, lakes and other scenic areas as may be identified by an area plan.

3. Enhance and maintain the visual appearance of buildings and **developments**.

1.7.2 *POLICIES*

1. **Scenic Resource Areas** as depicted on the Resource Protection Map (Figure 1) shall be governed by the provisions of the Scenic Resource Protection (SRP) Overlay Zone which include the following:

   (1) Any request for significant grading shall be evaluated through the discretionary permit process.

   (2) Removal, damaging or destruction of protected trees shall be in compliance with the County's "Tree Protection Regulations".

   (3) No **discretionary development** shall be approved which would significantly degrade or destroy a scenic view or vista.

   (4) No freestanding off-site advertising signs shall be permitted.

Federally-owned land is not subject to the Scenic Resource Protection Overlay Zone and is not subject to any permit requirements as specified under (1) or (2) above. To the extent possible, the agencies responsible for the administration of land use activities on Federally owned land should consider Policies (3) and (4) above in the planning and administration of new land uses within **scenic resource areas**.

2. **Scenic Highway Areas** as depicted on the Resource Protection Map (Figure 1) shall be governed by the provisions of the Scenic Highway Protection (SHP) Overlay Zone which includes the following:

   (1) All **development** shall require a Planned Development Permit.

   (2) Removal, damaging or destruction of a protected tree shall be in compliance with the County's "Tree Protection Regulations".

   (3) All new development shall be sited and designed to:

      a. Minimize alteration of the natural topography and physical processes;

      b. Prevent significant degradation of the scenic resource;

      c. Minimize cut and fill operations, and area of disturbance;

      d. Utilize native plants indigenous to the area whenever possible for revegetation;

      e. Incorporate best feasible mitigation measures; and

      f. Incorporate tree protection during construction.

   (4) Off-site signs are prohibited in the SHP Overlay Zone.

   Federally-owned land is not subject to the Scenic Highway Protection Overlay Zone and is not subject to any permit requirements as specified under (1) or (2) above. To the extent possible, the agencies responsible for the administration of land use activities on Federally owned land should consider Policies (3) and (4) above in the planning and administration of new land uses within **scenic highway areas**.

3. Proposed undergrounding of overhead utilities within **Scenic Resource Areas** or **Scenic Highway Areas** shall be given first priority by the Public Works Agency in utilizing the County's allocation of Utility Undergrounding Funds.

4. **Discretionary development** which would significantly degrade visual resources or significantly alter or obscure public views of visual resources shall be prohibited unless no feasible mitigation measures are available and the decision-making body determines there are overriding considerations.

5. The Planning Division shall continue to implement the landscaping requirements of the Zoning Ordinance and the "Guide to Landscape Plans" to enhance the appearance of **discretionary development.**

1.7.3 *PROGRAMS*

1. The Planning Division, in coordination with appropriate State and local agencies, will inventory and take steps to preserve and maintain unique natural features, and other scenic resources. These areas could be included in future **Scenic Resource Areas** and **Scenic Highway Areas** for consideration by the Board of Supervisors.

2. The Planning Division will continue to seek official State Scenic Highway designations for County designated Scenic Highways.

1.8 PALEONTOLOGICAL AND CULTURAL RESOURCES

Paleontological resources are the fossilized remains of ancient plants and animals.

A wide variety of paleontological resources exist in both the North and South halves of the County. The diverse geology of the Transverse Ranges encompasses many different kinds of fossil organisms. These fossil remains provide a record of lifeforms over millions of years, as well as having potential economic value.

The term **cultural resources** is most frequently identified with prehistoric (archaeological) or historic material items. These include prehistoric and historic districts, sites, structures, artifacts and other evidence of human use considered to be of importance to a culture, subculture, or a community for traditional, religious, scientific or other reasons. Cultural resources in Ventura County include: prehistoric aboriginal Indian sites, historic areas of occupation and activity, or features of the natural environment. **Cultural resources** also include less tangible, nonmaterial resources. These may include cognitive systems (including meanings and values attached to items of material culture, biota, and the physical environment), religion and world views, traditional or customary behavior patterns, kinship and social organization, folklore, and so on.

Archaeological resources refer to the material remains (artifacts, structures, refuse, etc.) produced purposely or accidentally by human beings. The scientific study of these remains can result in the identification of activities, types of adaption to the environment, and changes in activities and organization that were experienced by groups of people in the past. Furthermore, these remains often have special significance to Native Americans, ethnic groups, special interest groups (i.e., avocational archaeologists), and the general public.

Archaeological sites exist throughout the County, particularly adjacent to existing and previously existing natural water and food sources. Many sites have been located, and according to existing data, many potential sites remain undiscovered.

In the North Half there are 106 cultural resource sites which are recorded with Ventura County numbers in the official clearinghouse (at the University of California - Los Angeles). The Forest Service has surveyed and recorded an additional 71 sites and the Bureau of Land Management surveyed the Hungry Valley area and recorded 57 for a total of 234 known sites as of 1987. Two archaeological sites in the North Half are listed on the National Register of Historic Places and are characterized by a variety of remains including shells and sharks teeth.

Several Chumash villages in the North Half contain caves with elaborate artwork. A preliminary list of special management properties compiled by the Forest Service in the Los Padres National Forest (as of March, 1985) included both Mount Pinos and Frazier Mountain as sites of value to the practice of Indian religion. These sites are considered by many Native Americans to be the center of the Chumash world. Sespe Hot Springs and Nordhoff Peak are also significant religious sites.

In the South Half there are three archaeological sites on the National Register: Burro Flats Painted Cave, Calleguas Creek Archaeological Site and a lithic scatter (the remnants of stone implement fabrication) in Senior Canyon. In addition, many other significant sites are located in the South Half, including many large villages located near the coast and along major waterways.

Historical resources refer to the material and nonmaterial expressions of human adaptations which characterized the post-contact or historic period. These resources include historic event or activity sites, historic archaeological sites, standing architecture and other significant properties, and documents and other sources of historical information, objects of material culture, and,

secondarily, the more nonmaterial cultural qualities such as folklore, social organization, and value systems which are associated with these properties.

The Ventura County Cultural Heritage Board recommends cultural, archaeological and historical resources for designation as County Historical Landmarks. The 42 landmark categories range from adobes to wharf sites. There are 136 sites designated Countywide. In the North Half, three sites are so designated. Sites in the South Half include homes, oil industry workings, ranches, groves of trees, cemeteries, portions of the Mission Aqueduct, and others. The list is quite diverse and properties are regularly considered for addition to the Landmarks list by the Cultural Heritage Board.

There are 16 historic sites listed on the National Register of Historic Places. Thirteen of these are also designated as County Landmarks and five of the 13 are California Historical Landmarks.

The goals, policies and programs which apply to paleontological and cultural resources are as follows:

1.8.1 ***GOALS***

1. Identify, inventory, preserve and protect the **paleontological** and **cultural resources** of Ventura County (including **archaeological, historical** and **Native American resources**) for their scientific, educational and cultural value.

2. Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County's **paleontological** and **cultural resources.**

1.8.2 ***POLICIES***

1. **Discretionary developments** shall be assessed for potential **paleontological** and **cultural resource** impacts, except when exempt from such requirements by CEQA. Such assessments shall be incorporated into a Countywide paleontological and cultural resource data base.

2. **Discretionary development** shall be designed or re-designed to avoid potential impacts to significant **paleontological** or **cultural resources** whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less than significant level and/or shall be mitigated by extracting maximum recoverable data. Determinations of impacts, significance and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups), historical or paleontological consultants, depending on the type of resource in question.

3. Mitigation of significant impacts on **cultural** or **paleontological resources** shall follow the Guidelines of the State Office of Historic Preservation, the State Native American Heritage Commission, and shall be performed in consultation with professionals in their respective areas of expertise.

4. Confidentiality regarding locations of archaeological sites throughout the County shall be maintained in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

5. During environmental review of **discretionary development** the reviewing agency shall be responsible for identifying sites having potential archaeological, architectural or historical significance and this information shall be provided to the County Cultural Heritage Board for evaluation.

6. The Building and Safety Division shall utilize the State Historic Building Code for preserving historic sites in the County.

1.8.3 *PROGRAMS*

1. The County Cultural Heritage Board will continue to assist the County of Ventura in identifying and preserving significant County architectural and historical landmarks.

2. The Planning Division will continue to compile and retain a list of qualified archaeological, historical, and paleontological consultants to provide additional information to complete Initial Studies and Environmental Analyses.

3. The General Services Agency will continue to develop a cultural resources program at Oakbrook Park emphasizing Chumash history and heritage.

1.9 ENERGY RESOURCES

Energy is an equally essential resource to the modern day world as are land, air and water resources. It is required for all human activity and provides the power necessary to operate and maintain our way of life.

Ventura County relies primarily on an interrelated energy system. Electricity and natural gas are the primary forms of household energy while petroleum is the primary energy source for most modes of transportation. The utilization of each of these energy sources raises energy resource availability, environmental and conservation issues.

Considerable energy can be saved in new and existing buildings through efficient design, more efficient appliances, and the use of renewable energy resources. Buildings use 40% of the nation's energy. Much of this energy can be saved by fitting existing buildings with energy conservation systems and utilization of **renewable energy** such as solar energy. Other renewable energy resources include: hydroelectricity, biomass (organic matter), wind and cogeneration. The sun is the most abundant source of renewable energy. Efficient use of public transportation and the encouragement of van pools and carpools could make significant energy conservation contributions.

Land use patterns and development practices have a profound effect on energy usage. New buildings can be expected to have a natural life span of 50 years or more. For energy planning purposes, building size, design and arrangement, the mix of land uses, and the geographic extent of the built environment are critical factors with long-term implications. Because land use patterns determine distances between residential, commercial and industrial developments, they influence an individual's decision to walk, bicycle, drive or use public transit. Development practices directly affect the amount of energy needed to operate a building. Building orientation, color, shading, windows and landscaping are among the many factors that can be manipulated to optimize opportunities for energy conservation.

The goals, policies and programs which apply to energy resources are as follows:

1.9.1 *GOALS*

1. Promote land use patterns which minimize energy consumption.

2. Encourage the use of **renewable** sources of **energy** and energy conservation techniques in new development.

3. Encourage retrofit programs for energy conservation.

4. Encourage increased fuel efficiency of vehicles and decreased number and length of vehicle trips.

1.9.2 *POLICIES*

1. **Discretionary development** shall be evaluated for impact to energy resources and utilization of energy conservation techniques.

2. Land use policies in area plans should be developed to promote energy conservation and should include the following:

   (1) The pattern of residential, commercial and industrial land use should be compact, relate to transit routes and centers and minimize vehicular travel.

   (2) The infill of vacant lots should be encouraged over step-out developments.

3. Energy efficiency and **renewable energy** use shall be included as factors in designing capital improvement projects of all County agencies, departments and service areas.

4. The Building and Safety Division shall continue to implement Title 24 energy efficiency standards for buildings.

5. Tentative subdivision maps shall provide, to the extent feasible, for passive or natural heating or cooling opportunities in the subdivision.

1.9.3 ***PROGRAMS***

1. The General Services Agency will review its energy consumption performance and implement programs designed to increase energy efficiency in County buildings, including, but not limited to:

   - installation of insulation where feasible,
   - installation of plumbing flow restrictors,
   - reduced operating hours for heating, ventilating and lighting systems,
   - installation of weather stripping on all openable doors and windows,
   - development of energy audit and energy management programs,
   - implementation of operation and maintenance programs which contribute to energy conservation,
   - develop energy audits and energy management programs for all County facilities,
   - develop a plan to re-invest utility company rebates and utility savings into a long range funding program for on-going conservation projects,
   - implement operational and maintenance programs which contribute to energy conservation,
   - investigate and implement new energy technologies such as solar and fuel cells,
   - install energy management systems in all County facilities to control air conditioning and lighting systems,
   - install ceiling, wall, and roof insulation whenever feasible,
   - install plumbing flow restrictors in toilets, lavatories and showers, and
   - provide energy conservation training and literature to all County agencies.

2. The Planning Division will continue to promote the efficient use of energy resources related to landscaping and the heating and cooling of water through the Government, Utilities and Private Industry (GUPI) Program.

3. The Solid Waste Management Department will seek to reduce the amount of waste disposed and energy consumed and implementing where viable:

   - source reduction
   - recycling programs,
   - waste composting programs, and
   - public information programs.

4. The County will continue to implement the Air Pollution Control District's Trip Reduction Rule 210 which reduces energy consumption and improves air quality. This would include, but is not limited to:

   - promotion of park-and-ride lots,
   - promotion of Countywide Transit Information Center,
   - promotion of Commuter Rail System,
   - ridesharing promotion,
   - modified work schedules,
   - parking management programs,
   - employer-sponsored van pools, and
   - public transit promotion.

1.10 COASTAL BEACHES AND SAND DUNES

Sandy beaches are nourished largely by the weathering of coastal bluffs and dunes, and by riverine transport of material to the sea. Ventura County has three major sources of beach sand: the Santa Clara River (contributing 60%), the other rivers and streams (10%), and beaches upcoast of the Ventura River (30%). The total volume of sand contributed by these sources is estimated to vary from 200,000 to 1,700,000 cubic yards or 1,000,000 cubic yard average per year (Ventura County Flood Control District, 1979). This sand becomes part of the Santa Barbara **littoral cell** in which the north to south littoral drift terminates in the Mugu and Hueneme submarine canyons.

A littoral cell is a section of shoreline where the flow of sand begins at a major sediment source and terminates at a major sediment sink, such as submarine canyon. In Ventura County, waves moving in the direction of prevailing westerly to northwesterly winds generally meet the beaches at a slight angle because of the shoreline's orientation from northwest to southeast. The resultant effect is a net movement of sand over time from northwest to southeast along the beaches.

The maintenance of sandy beaches is critical because beaches serve as natural buffers between wave action and easily eroded uplands. Sandy beaches tend to dissipate wave energy, yet incur very little damage. Naturally occurring buffer zones (such as coastal sand dunes) are generally much more effective at reducing wave damage and protecting the coastline than are man-made protective devices (Department of Navigation and Ocean Development, 1979).

The recreation value of beaches and their contribution to the County tourist industry is significant. Loss of recreation and private beaches has occurred along the North Coast of the County with attendant loss of surfing areas as well. Loss of beach homes from storm damage has occurred in areas of beach depletion. Countywide, beaches are eroding at the rate of 0.7 feet per year (Army Corps of Engineers, Ventura County Survey Report for Beach Erosion Control, May 1980).

Sand dunes constitute another important coastal resource. Major sand dune communities are found in the McGrath-Mandalay area, at Ormond Beach, in the vicinity of Point Mugu, and near the mouths of the Santa Clara and Ventura Rivers.

Generally, sand dunes form as windblown sand collects on an object of obstruction. Coastal sand dunes are extremely fragile, yet highly protective. They inhibit beach erosion and form a protective buffer from both wind and wave action for areas and resources, both natural and man-made, immediately inland. They also protect coastal salt marshes and wetlands. Coastal dunes also have biological significance. In this County, they provide nesting habitat for the snowy plover, the California least tern (an **endangered species**), and a number of other shore birds. They also support a variety of coastal plant species, including the sand verbena, the sea rocket, the sea fig, and others. Vegetation is particularly important to the maintenance of the dunes, insofar as it serves to stabilize the dunes and promote dune formation.

Coastal dune formations are dynamic in nature, migrating and reforming, depending on wind and wave patterns and coastal topography. Development in the vicinity

of dunes is therefore, often subject to sand encroachment, which results in increased costs for street sweeping and sand removal.

The ecological as well as protective characteristics of dune communities can be easily altered by human activities, especially development and off-road vehicle use. Additionally, unrestricted pedestrian access may, on a cumulative basis, result in the trampling and loss of dune vegetation and ultimately in the degradation of the community and loss of the dune.

For a discussion of Coastal wave and beach erosion hazards, refer to Section 2.11 of the Hazards Chapter.

The goal, policies and program which apply to coastal beaches and sand dunes are as follows:

1.10.1 *GOAL*

Protect and conserve coastal beaches and sand dunes.

1.10.2 *POLICIES*

1. **Discretionary development** which would cause significant impacts to coastal beaches or sand dunes shall be prohibited unless the development is conditioned to mitigate the impacts to less than significant levels.

2. **Discretionary developments** which would result in the removal of dune vegetation shall be conditioned to replace the vegetation.

3. All **shoreline protective structures** which alter natural shoreline processes shall be designed to eliminate or mitigate adverse impacts on local shoreline sand supplies.

4. Discretionary permits for all mining activities in County streams and rivers shall incorporate all feasible measures to mitigate beach sand replenishment impacts.

1.10.3 *PROGRAM*

Ventura County will continue to participate in the BEACON (Beach Erosion Authority for Control Operations and Nourishment) Joint Powers Agreement, created in 1986 with Santa Barbara County and all coastal Cities, to promote beach sand replenishment and coordinate government funding efforts to fight beach erosion.

2. HAZARDS

This Chapter of the County General Plan identifies **goals**, **policies**, and **programs** relating to existing and potential hazards, and other significant physical constraints to development/land use. The specific goals, policies, and programs are organized under the following major headings: general goals, policies and programs, fault rupture, ground shaking, tsunami, seiche, liquefaction, landslides/mudslides, inundation from dam failure, subsidence, expansive soils, coastal wave and beach erosion hazards, flood hazards, fire hazards, noise, airport hazards, and hazardous materials and waste.

2.1 GENERAL GOALS, POLICIES AND PROGRAMS

The following general goals, policies and programs apply to Hazards:

2.1.1 *GOALS*

1. Identify all major hazards and other physical constraints to development in Ventura County, and convey this information to all appropriate parties.

2. Protect the public health, safety and general welfare from hazards and disasters.

3. Protect public and private property and facilities from hazards and disasters.

4. Minimize loss of life, injury, damage to property, and economic and social dislocations resulting from hazards and disasters.

2.1.2 *POLICIES*

1. Applicants for land use and **development** permits shall provide all necessary information relative to hazardous conditions which may affect their proposals. Applicants shall also specify how they intend to alleviate identified hazards.

2. All geologic and soil reports submitted with **development** permit applications, including recommendations for measures to eliminate or mitigate any possible hazard, shall be reviewed by qualified personnel registered and certified by the State, such as engineers or engineering geologists.

3. All agencies involved in warning and evacuation activities shall periodically review and, if necessary, update their plans and procedures based on the hazards defined and described in this Chapter, and shall provide updated hazards and constraints information to the County Planning Division when available.

4. **Essential facilities, special occupancy structures** and **hazardous facilities** shall be designed and constructed to resist, insofar as is practical, the forces generated by earthquakes, gravity, fire and winds.

5. The County Building and Safety Division shall continue to enforce requirements of the Uniform Building Code pertaining to earthquake-resistant design and construction.

2.1.3 *PROGRAMS*

1. The County Planning Division, with the technical support of the Public Works Agency and other applicable agencies, will annually review the Hazards Appendix to identify what information needs to be updated, and where appropriate, shall submit a budget request as part of the next year's County budget.

2. General Services Agency, Risk Health and Safety/Loss Prevention (HSLP) will continue with the Seismic Management Program. The program, which is applicable to all County owned buildings and facilities, addresses structural, nonstructural, life lines and life safety issues related to earthquake events.

3. The County Building and Safety Division should prepare a program for Board consideration to reduce structural deficiencies through the removal, reinforcement, or modification of the structures whose failure could cause significant numbers of injuries, substantial loss of life, or unacceptable level of economic loss.

4. General Services Agency, Risk Health and Safety/Loss Prevention (HSLP) will continue the Asbestos Management Program which provides a full range of asbestos services applicable to all County owned facilities and operations.

5. The County Sheriff's Department Office of Emergency Services will continue to maintain and periodically update the Ventura County Multihazard Functional Plan including mitigation measures and preparedness, response, and recovery strategies for the following ten hazard specific contingency sections (i.e. plans):

   - "Major Earthquake"
   - "Major Hazardous Material Incident"
   - "Flood Hazard"
   - "Dam Failure"
   - "Nuclear Defense Emergencies" (Nuclear Attack Threat Assessment)
   - "Wildland Fire"
   - "Major Transportation Accidents"
   - "Landslide"
   - "Tsunami" (and Seiche)
   - "Off Shore Oil Incidents"

6. The Building and Safety Division will comply with applicable provisions of Chapter 12.2 (commencing with Sec. 8875), Division 1, of Title 2 of the Government Code, pertaining to identification of potentially **hazardous buildings** in the unincorporated area of Ventura County, and establishment of a mitigation program for such potentially **hazardous buildings**.

2.2 FAULT RUPTURE

A **fault** is a fracture in the earth's crust accompanied by displacement of one side of the fracture with respect to the other side. Most faults are the result of repeated displacement which may have taken place suddenly or by "slow creep" over time.

An **active fault** (or "Holocene Fault") is a fault that shows evidence of movement during the Holocene (within the last 11,000 years) and can be expected to move within the next 100 years.

A **potentially active fault** is either: (1) a fault known to have been active in the Pleistocene Period, but cannot be shown to be inactive in the Holocene Period, or (2) a fault which, because it is judged to be still capable of ground rupture or shaking, poses an unacceptable risk for an existing or proposed structure.

An **inactive fault** is a fault which shows no evidence of movement in recent geologic time and which has no potential for future movement in the currently known seismic setting.

The County of Ventura lies within the seismically active region of Southern California and is transected by many faults. Currently, there are five active major **fault hazard areas** in the South Half of the County. (1) The San Cayetano Fault Zone extends from Los Angeles County to Ojai, north of the Santa Clara

River Valley. (2) The Oak Ridge Fault generally follows the Santa Clara River bed with a southern deviation near Fillmore. (3) The Red Mountain Fault and its associated faults extend from the Ventura River to the border with Santa Barbara County. (4) The Ventura Faults extend from near the Ventura River easterly to just past Kimball Road in East Ventura. (5) The Springville Fault trends along the southern margin of the Camarillo Hills. Additionally, there is a zone of short, active faults extending from Oak View to Meiners Oaks. The Big Pine Fault, which bisects Lockwood Valley, is the only currently known active fault located in the North Half of the County. It is likely that additional fault hazard areas will be designated in the future.

The State Legislature, concerned about public safety near hazardous faults, enacted the **Alquist-Priolo Special Studies Zones** Act in 1972. To assure that homes, offices, hospitals, public buildings, and other structures for human occupancy are not built on **active faults**, the Act requires a geological investigation before local governments can approve most development projects in special studies zones.

The goal, policies and programs which apply to fault rupture are as follows:

2.2.1 *GOAL*

Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from fault rupture.

2.2.2 *POLICIES*

1. Detailed seismic geologic investigations are required for all proposed developments in **Alquist-Priolo Zones**, Fault Hazard and Potential Fault Hazard areas. Development will not be allowed unless the investigation confirms that the proposed buildings and structures are not subject to substantial fault rupture hazard.

2. No habitable buildings or other structures shall be located over any **active** or **potentially active fault**. No habitable buildings or other structures shall be located within 50 feet of the mapped trace of an active or potentially active fault unless the trace of the fault can be directly observed and the location precisely determined across the site.

3. All development projects involving construction within an **Alquist-Priolo Special Studies Zone** (as depicted on the Hazards Protection Maps, Figure 2) shall be reviewed by the County Public Works Agency in accordance with the requirements of the Alquist-Priolo Special Studies Zones Act and the policies and criteria established by the State Mining and Geology Board pursuant to said Act.

4. Land in **Alquist-Priolo Special Studies Zones** and **fault hazard areas** should, where feasible, be designated Open Space or Agriculture on the General Land Use Maps (Figure 3.1).

5. Roads, streets, highways and utility conduits shall be planned to avoid crossing **active** or **potentially active faults** where feasible. When such location is unavoidable, the design shall include measures to reduce the effects of any fault movement as much as possible.

6. No new **essential facilities, special occupancy structures** nor **hazardous facilities** shall be located within **fault hazard areas** or potential fault hazard areas unless it can be adequately demonstrated that the risk of fault rupture is low. No new **essential facilities, special occupancy structures** nor **hazardous facilities** shall be located within **Alquist-Priolo Special Studies Zones.**

2.2.3 *PROGRAMS*

1. The Fault Rupture Section shall be updated as part of the next update to the Hazards Appendix of the County General Plan.

2. The Multihazard Functional Plan's Major Earthquake Contingency section will be reviewed and revised annually by the County Sheriff's Office of Emergency Services. The Office of Emergency Services will continue to provide public information programs and pamphlet information on earthquake preparedness.

3. The Building and Safety Division is responsible for implementing the requirements of the Essential Services Buildings Seismic Safety Act of 1986. General Services Agency, Risk Health and Safety/Loss Prevention provides the necessary support through the Seismic Management Program.

2.3 GROUND SHAKING

Ground shaking is the physical movement of the land surface due to earthquakes. Ground shaking is the most hazardous effect of earthquakes because it is most widespread and accompanies all earthquakes. The largest losses of life and property during an earthquake are due to violent ground shaking. The primary effects of ground shaking are the damage to structures(from minor cracking of plaster to total destruction) and infrastructure (damage to roads, bridges, power lines, water and sewer lines, etc.), and the related potential for human injuries and loss of life. The serious secondary effects of ground shaking, namely **liquefaction, tsunamis, seiches** and landslides, are also dealt with as separate hazards. The State Division of Mines and Geology in their publication entitled "Urban Geology" (1973 Bulletin 149) indicates that on a State-wide basis, the potential hazard to structures from ground shaking is higher than from any other seismic hazard. The anticipated losses from ground shaking for the years 1970-2000 are estimated to be over twice that from landsliding and over 200 times that estimated for fault displacement.

Ventura County lies within the highly active earthquake region of Southern California. Available geologic information indicates that the potential of strong ground shaking occurring over much of the County as a result of an earthquake along one of the major faults within the County, within the useful life of existing structures, is high when compared to other areas of the State. This is because of the presence of several large, **potentially active fault** systems. Exactly where, when, and how strong the next earthquake sill be cannot be determined. The probability of an earthquake is determined by a number of factors, the most important of which are the location and number of **active faults** in an area, and the tensional and compressional forces exerted along these faults.

In the event of a strong earthquake (6.0 - 7.5 magnitude on the Richter Scale) originating in the vicinity of the southern County area, or a major earthquake (8.0+ magnitude) along the San Andreas Fault, damage to many existing structures could be severe and some loss of life could occur.

The ground shaking hazard exists throughout Ventura County and is most significant wherever there is ground material that could greatly amplify the ground waves of an earthquake. **Ground shaking hazard areas** are areas that can be expected to experience intense ground shaking during a maximum probable earthquake.

The potential for highest amplification of ground shaking occurs in areas where the long period wave shaking is greatest. Basically, these areas are the Oxnard Plain and the Santa Clara River Valley in the south half of the County, and in the Lockwood, Cuyama, and Cuddy Valleys in the north half.

The effects of the hazard can be reduced by prudent location and design of structures and vital facilities, and determination of which existing structures and facilities should be strengthened, replaced or modified in use.

The goal, policy and programs which apply to ground shaking are as follows:

2.3.1 *GOAL*

Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from ground shaking.

2.3.2 *POLICY*

All structures designed for human occupancy shall incorporate engineering measures to mitigate against risk of injury in areas identified by the Public Works Agency as subject to ground shaking.

2.3.3 *PROGRAMS*

1. The Ground Shaking Hazard Section shall be updated as part of the next update to the Hazards Appendix of the County General Plan.

2. The County Public Works Agency shall cause a study to be prepared examining existing County-owned public utility systems for susceptibility to damage from ground shaking, and shall analyze the extent of acceptable risk of the effects of such ground shaking.

2.4 TSUNAMI

A **tsunami** is a traveling ocean wave generated by disturbances associated with earthquakes, volcanoes or major submarine landslides. Man-made tsunamis have been generated by the explosion of underwater nuclear bombs at Bikini atoll and elsewhere. These waves have a long wavelength (distance from the crest of one wave to the crest of the succeeding wave), normally over 100 miles, and a very low amplitude (height from crest to trough). As these waves approach shallow water, the speed decreases from a deep water speed of over 600 m.p.h. to less than 30 m.p.h., and their energy is transferred from wave speed (velocity) to wave height (amplitude); waves as high as 80 feet can be formed. Although the arrival time of waves can be predicted, the intensity of the wave when it reaches shore cannot be predicted.

Tsunamis are a threat, not because they are extensive or frequent, but because the destruction they cause can be devastating. Tsunamis can cause loss of life from drowning, and they can cause extensive damage to structures on or near beaches. In addition, water systems can be contaminated, power supplies disrupted, and transportation systems blocked or dislocated. There can also be an increased occurrence of fire from broken oil or gas tanks or lines, as well as flooding from blocked rivers, etc. The danger is compounded by the fact that the intensity of the wave is unpredictable and the threat is intermittent over many hours. The waves can arrive onshore in intervals of up to an hour, and since there are usually a number of waves (rather than just one), the threat usually exists for as long as ten to twelve hours. Tsunamis are sometimes preceded by a trough which appears to be an extremely low tide. The wave itself may follow the trough by 15 to 45 minutes.

The tsunami threat is mainly confined to the immediate beach areas and in river channels. Very flat beach areas have been affected up to a mile or more inland. All of the coastal areas in Ventura County are susceptible to tsunamis. Most of the land between the beach and the cliffs on both the north and south coasts is included within the hazard zone.

The goal, policy and program which apply to tsunami hazards are as follows:

2.4.1 *GOAL*

Minimize the risk of loss of life, injury from the damage to property, and economic and social dislocations resulting from a **tsunami**.

2.4.2 *POLICY*

Essential facilities, **special occupancy structures** and **hazardous facilities** should not be located in **tsunami** hazard areas.

2.4.3 *PROGRAM*

The County Sheriff's Department Office of Emergency Services will annually review and revise the County Multihazard Functional Plan's Tsunami/Seiche Contingency section.

2.5 SEICHE

A **seiche** is a long wave which oscillates in an enclosed or partially enclosed body of water as result of seismic or atmospheric disturbances. Seiches typically occur in lakes and bays, and are normally caused by unusual tides, winds or currents, but can also be produced by earthquake ground motion. The shaking rocks the water back and forth, setting up seiche waves.

The primary threat from a seiche is to structures in or very near a lake, harbor or bay. Boats and their moorings can be heavily damaged by seiches, and buildings and campgrounds can be inundated. Only in the case of an extremely severe seiche, a rare occurrence, would loss of life be likely from the seiche itself. The secondary effects of a seiche can often produce more damage than the seiche itself. Large seiches can overtop the dams of man-made lakes or reservoirs, causing flooding in the areas downstream. This overtopping can also wash out earth-fill dams, causing their complete collapse.

The **Seiche Hazard Area** surrounds all of the County's reservoirs and lakes up to an elevation of 10 feet above the normal water level. The lakes that are impounded by earth-fill **dams** could have the greatest hazard potential. These lakes are Lake Bard (Wood Ranch Reservoir), Lake Piru and Lake Casitas. The Santa Clara River Valley could also be affected should a seiche-caused dam failure occur on Castaic Reservoir or Pyramid Reservoir. In addition, some of the homes at Lake Sherwood could be inundated during a seiche.

The goal, policies and program which apply to seiche hazards are as follows:

2.5.1 *GOAL*

Minimize the risk of loss of life, injury, damage to property and economic and social dislocations resulting from a **seiche**.

2.5.2 *POLICIES*

1. The **Seiche Hazard Area** shall be used for regional and area plans and special studies, and to guide future investigations of the hazard.

2. The Seiche hazard shall be taken into account in the design of all development within the **Seiche Hazard Area**.

2.5.3 *PROGRAM*

The County Sheriff's Department Office of Emergency Services will annually review and revise the Multihazard Functional Plan's Tsunami/Seiche Contingency section.

2.6 LIQUEFACTION

Liquefaction is a process by which loose, water-saturated granular materials (silt, sand or gravel) behave for a short time as a dense fluid rather than as a solid mass, usually as a result of ground shaking of high intensity and long duration. Liquefaction is manifested either by the formation of sand boils and mudspouts at the ground surface and the seepage of water through ground cracks, or, in some cases, by the development of quicksand-like conditions over substantial areas. When the quicksand-like conditions occur, buildings may sink substantially or tilt into the ground and lightweight buried facilities may float to the surface. Other manifestations are landslides which can move hundreds of feet, and lateral earth spreading of tens of feet.

The liquefaction hazard generally exists throughout the Oxnard Plain and Pleasant Valley. The hazard areas extend up the Ventura and Santa Clara Rivers, mainly in the areas underlain by extensive alluvial deposits. Some of the valleys in the Thousand Oaks area are also affected, as is the Arroyo Santa Rosa downstream of the City of Thousand Oaks-Hill Canyon Wastewater Treatment Plant. Simi Valley is affected at both the east and west ends. Both the upper and lower Ojai Valleys are in the hazard areas as well as San Antonio Creek from Ojai to the Ventura River. The low lying areas north of Lake Casitas are also subject to liquefaction. There are other scattered locations affected by liquefaction hazard; they are usually in stream canyons, tributary to the major areas.

Many riparian (streamside or lakeside) areas could be disrupted by liquefaction in case of major shaking. These areas include (1) San Antonio and Thacher Creeks; (2) Ventura River; (3) Lake Casitas and low lying areas of the Casitas watershed; (4) the Santa Clara River and Piru Creek area; (5) Calleguas Creek including Arroyo Simi from Simi Valley to beyond Virginia Colony; (6) Arroyo Conejo from the Thousand Oaks Hill Canyon Sewage Treatment Plant through most of the Santa Rosa Valley; (7) Mugu Lagoon and coastal areas north of the lagoon which were originally tidal estuaries; and (8) coastal beach areas.

The goal, policy and program which apply to liquefaction are as follows:

2.6.1 ***GOAL***

Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from **liquefaction.**

2.6.2 ***POLICY***

Prior to the issuance of building or grading permits for **essential facilities, special occupancy structures** or **hazardous facilities** located within areas prone to **liquefaction,** a soils engineering and geologic-seismic analysis shall be prepared in order to assess the **liquefaction** potential and mitigation.

2.6.3 ***PROGRAM***

The Liquefaction Section will be updated as part of the next update to the Hazards Appendix of the County General Plan.

2.7 SUBSIDENCE

Subsidence is any settling or sinking of the ground surface arising from surface or subsurface causes. Its usual form is a dish-shaped or bowl- shaped region of downward surface displacements. Some types of subsidence can be the result of natural processes, including natural compaction of loosely consolidated alluvium ("consolidation" refers to the gradual compression of a soil under applied load), as well as tectonics and earthquakes. Other types of subsidence are caused by human activities. In California, four types of the latter have been identified; they are named according to the action that causes the subsidence: groundwater withdrawal subsidence, oil or gas withdrawal subsidence, hydrocompaction subsidence and peat oxidation subsidence. Only the first two types are known to be causing problems in Ventura County; evidence of subsidence caused by peat oxidation or hydrocompaction (the wetting and subsequent collapse of loose soil structures) has not been found. Of all of the types, groundwater withdrawal subsidence, which generally occurs in valley areas underlain by alluvium, is the most extensive and the impacts most costly. The subsidence problem exists mainly in the Oxnard Plain area of the County.

The goal, policies and program which apply to subsidence are as follows:

2.7.1 ***GOAL***

Minimize the risk of damage to structures from the effects of **subsidence.**

2.7.2 *POLICIES*

1. Potential **subsidence** shall be evaluated prior to approval of new oil or gas well drilling permits.

2. Structural design of buildings and other structures shall recognize the potential for differential settlement and **subsidence.**

3. No structure which is needed for public safety or emergency services shall be located where an interruption in service could result from structural failure due to **subsidence.** If such location in an area subject to potential **subsidence** is unavoidable, the structure shall be designed to mitigate the hazard.

2.7.3 *PROGRAM*

The County Surveyor is in the process of reobserving the entire County benchmark network for the purpose of establishing the new national vertical datum in the County. The Surveyor will coordinate with the County Planning Division to modify the appropriate sections of the Hazards Appendix after the process has been completed.

2.8 EXPANSIVE SOILS

Expansive soils are soils that have a high shrink-swell potential; such soils expand when wet and contract when dry. Wetting can occur naturally in a number of ways (e.g., rainfall, groundwater fluctuations) as well as from other sources, such as lawn watering, broken water or sewer lines, etc. Local soils can be expected to shrink or swell if they have a significant clay content. Typically, expansive soils are located in areas of moderate slope which are coincidentally the areas generally most attractive for intense, urban type uses. The movement of expansive soil may be slow, progressing over a period of years. Commonly, this movement is associated with seasonal or even longer wet/dry cycles.

Soil expansion can cause structural damage to structures, pavement and utilities in two ways. First, the expansion of the soil can cause it to heave and thus place direct pressure on a structure. Second, soil expansion can lead to the loss of support under part of a structure. This can occur during swell conditions if the saturated soil shifts due to the weight of the structure, or in dry conditions if the soil shrinks and support is withdrawn. Damage can range from the impaired functioning of doors and windows through plaster and foundation cracks to total destruction in extreme cases. Records exist of expansive soils causing damage to highways, buildings, reservoirs, swimming pools, canals and utilities of all types.

The goal and policies which apply to expansive soils are as follows:

2.8.1 *GOAL*

Minimize the risk of damage to structures from the effects of **expansive soils.**

2.8.2 *POLICIES*

1. In all areas except sandy beach areas, a soil test shall be required for each specific building site, and construction must conform to established standards of the County Building Code.

2. A preliminary soils report, prepared by a registered civil engineer and based upon adequate test borings, shall be submitted to the County Surveyor and Environmental Health Division for every subdivision and for each individual lot where **expansive soils** have been identified.

3. No habitable structures or **individual sewage disposal systems** shall be placed on or in **expansive soils** unless suitable mitigation

measures are incorporated to prevent the adverse effect of these conditions.

2.9 LANDSLIDES/MUDSLIDES

"Landslide" is a general term for the dislodging and falling of a mass of soil or rocks along a sloped surface, or the dislodged mass itself. A "mudslide" is a flow of very wet rock and soil.

The primary effects of landsliding or mudsliding can include:

- Human injury and loss of life;
- Abrupt depression and lateral displacement of hillside surfaces over distances of up to several hundreds of feet;
- Disruption of surface drainage;
- Blockage of flood control channels and transportation routes;
- Displacement or destruction of man-made facilities such as roadways, buildings, oil and water wells, etc.

Almost all sites with potential for landsliding/mudsliding lie within the hillside and coastal areas of Ventura County. Since the primary land use within these areas is residential, the hazard primarily impacts dwellings and the associated utility facilities. The level of hazard Countywide is unknown as geologic information of sufficient detail for specific developed areas is not available.

The hazard from landsliding is also considered to exist within the areas of the County which were developed prior to present-day grading and building codes. The level of hazard cannot readily be determined without detailed investigation of individual sites. This is considered to be the responsibility of the individual property owner.

The goal, policies and program which apply to landslides/mudslides are as follows:

2.9.1 *GOAL*

Minimize the risk of life, injury, damage to property, and economic and social dislocations resulting from landslides/mudslides.

2.9.2 *POLICIES*

1. The County Public Works Agency will continue to enforce Chapter 70 (Excavation and Grading) of the Uniform Building Code to ensure that areas of landslide or hillside areas are adequately investigated and that any development incorporates appropriate design provisions to prevent landsliding.

2. Development in existing **landslide/mudslide hazard areas** shall not be permitted unless adequate geologic and soils engineering investigations are performed, and appropriate and sufficient safeguards are incorporated into the project design.

3. In **landslide/mudslide hazard areas**, there shall be no avoidable alteration of the land which is likely to increase the hazard, including concentration of water through drainage, irrigation or septic systems, removal of vegetative cover, and no steepening of slopes or undercutting of the bases of slopes.

4. Drainage plans which direct runoff and drainage away from unstable slopes shall be required for construction in hillside areas.

2.9.3 *PROGRAM*

The Landslides/Mudslides Section shall be updated as part of the next update to the Hazards Appendix of the County General Plan.

2.10 AIRPORT HAZARDS

Although airplane crashes can occur anywhere, crashes which affect life and property on the ground occur most frequently in airport approach and departure zones. Residences, schools, and other buildings occupied by people which are located in such zones are subject to an ever-present risk from airplane accidents.

Hazard zones have been identified for the three airports within the County whose hazard zones overlay unincorporated territory: the Ventura County Airport at Oxnard, the Ventura County Airport at Camarillo, and the Point Mugu Naval Air Station. These zones represent the general areas most frequently impacted by aircraft emergency or crash landing during the take-off or approach phase. They also represent the areas which, based on aircraft operations and accident probability, should be controlled for the safety of persons both on the ground and in the aircraft.

The boundaries of the hazard areas are based on landing and take-off patterns and clear zones extending beyond the runway as recommended by the Federal Aviation Administration.

For general aviation airports, the hazard zone generally extends from the end of the runway 3,500 feet in length and 1,500 feet in width, and fans out from each end of the runway to include the descent and approach aspects of the flight patterns. Open space uses are preferred in this area to ensure that options are available to pilots in emergency situations.

The goal, policies and program which apply to airport hazards are as follows:

2.10.1 *GOAL*

Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from airport hazards.

2.10.2 *POLICIES*

1. To avoid accidents, land in airport approach and departure zones shall be designated Agriculture or Open Space on the General Plan Land Use Map (Figure 3.1) and shall be limited to the following uses:

    - Agriculture and agricultural operations.
    - Cemeteries.
    - Energy production from renewable resources.
    - Mineral resource development.
    - Public utility facilities.
    - Temporary storage of building materials.
    - Waste treatment and disposal.
    - Water production and distribution facilities.

2. Development within the airport approach and departure zones shall comply with Part 77 of the Federal Aviation Regulations (objects affecting navigable airspace).

3. Private airstrips and agricultural landing fields shall be sited so as not to conflict with the flight paths of existing airports and outside of areas which would present significant hazard or an annoyance to existing or planned land uses.

2.10.3 *PROGRAM*

The County Department of Airports shall periodically update the County Airport Master Plans, and shall pursue the airport safety/improvement projects described in the current approved master plans.

2.11 COASTAL WAVE AND BEACH EROSION HAZARDS

Coastal wave hazards can exist at shorelines as a result of the strong and damaging wave actions that can occur during storms. Damage to properties can result from high wave run-up, wave splashes and flying debris tossed by waves breaking at the beach or on coastal structures. The County Coastline Wave Hazard Areas are identified in the Flood Insurance Rate Map for Ventura County (unincorporated areas). These areas are defined as "V" zones by the Federal Emergency Management Agency (FEMA) through the National Flood Insurance Program (NFIP).

Numerous residences are located adjacent to the beach erosion and wave hazard areas identified by the "V" zones, and may be in danger of being destroyed or damaged as a result of being undermined by erosion or from wave and flooding damage. Most of these residences are located in the communities of Rincon, Mussel Shoals (Punta Gorda), Seacliff, Faria, Solimar and Solromar. Five parks in the Ventura County unincorporated area (Hobson County Park, Faria County Park, Emma Wood Beach Park, Point Mugu State Park and Leo Carillo State Beach) also lie within or adjacent to the Coastal Wave Hazard Area.

The erosion of coastal beaches is a very complex problem. The beach is in a perpetual state of dynamic disequilibrium, adjusting to changes in waves, currents, tides and sediment deposition. The force which moves sand along the shoreline, creating the phenomenon known as the "littoral drift", is provided by waves breaking at an angle along the beaches. The sand found on Ventura County beaches travels with the littoral drift from the northwest to southeast.

Man-made shoreline alteration can have severe effects on this natural process and must be closely monitored. Short-sighted solutions may aggravate erosion problems and pose secondary erosional impacts. Effective beach erosion management, therefore, requires a comprehensive understanding of the erosional process, as well as technically oriented, long-term management plans.

In addition to the littoral drift, there is an onshore-offshore movement of sand. Waves which are small or spaced far apart tend to move sand from the ocean bottom towards the beach, building it out. Large, closely spaced waves tend to cut back the beach and move the eroded sand seaward, forming sand bars in shallow water.

All beaches in Ventura County are subject to erosion to a certain degree. Even beaches stabilized by groins can erode, although they do so at a slower pace. Erosion will increase in the future at all beaches if sand supplies to the coast are decreased.

Intermittent portions of the County coastline are in the Beach Erosion Hazard Area. In the County unincorporated beaches, the Beach Erosion Hazard Areas are generally located at Rincon Point, Punta Gorda, Seacliff Colony, Pitas Point and Faria Colony, Solimar Beach, Bass Rock, and Solromar. The naval reservation at Point Mugu is also within the Hazard Area.

For a discussion of coastal beaches and sand dunes as a resource, refer to Section 1.10 of the Resource Chapter.

The goals, policies and program which apply to coastal wave and beach erosion hazards are as follows:

2.11.1 *GOALS*

1. Minimize the risk from the damaging effects of coastal wave hazards and beach erosion.

2. Reduce the rate of beach erosion.

2.11.2 *POLICIES*

1. All permits for seawalls, revetments, groins, retaining walls, pipelines and coastal outfalls shall be designed to mitigate wave hazards and protect against further beach erosion, and shall be referred to the County Public Works Agency to be reviewed for possible impacts on the beach area and ocean floor.

2. **Discretionary development** in areas adjacent to coastal beaches shall be allowed only if the Public Works Agency determines that wave action and beach erosion are not hazards to the proposed development, or that the hazard would be mitigated to a less-than-significant level, and that the project will not contribute significantly to beach erosion.

3. Information should be made available to property owners and residents living in coastal inundation areas to encourage participation in the Federal Flood Insurance Program.

2.11.3 *PROGRAM*

Ventura County will continue to participate in the **BEACON (Beach Erosion Authority for Control Operations and Nourishment)** Joint Powers Agreement, to promote beach sand replenishment and coordinate government funding efforts to fight beach erosion.

2.12 FLOOD HAZARDS

A "flood" is an overflow of water onto land that is normally dry. The most common type of flood, and the major subject of this section, is the "rainstorm-river" flood. A second major type is a "coastal" flood, resulting from a relative increase in sea level that may be caused by a storm, by a **tsunami**, or by **subsidence**. Other potential causes of floods in Ventura County include dam or levee failure, landslides and **seiches**.

The size and frequency of occurrence of a rainstorm-river flood in a particular channel depend on a complex combination of conditions, including the amount, intensity, and distribution of rainfall, previous moisture conditions, and drainage patterns. The area subject to inundation is generally referred to as the **flood plain**. The **flood plain** is divided into two hazard areas: (1) the **floodway**, which is the portion that carries the deep and fast-moving water (usually defined as the area needed to contain a 100-year storm flow); and (2) the **flood fringe area**, which is the remainder of the flood plain, subject to shallow, slow moving water.

The magnitude of a flood is measured in terms of its "peak" discharge, which is the maximum volume of water (in cubic feet per second) passing a point along a channel. Floods are usually referred to in terms of their frequency of occurrence, which is related to discharge; for example, the "100-year flood" for a particular channel is the size flood which has a probability of being equalled or exceeded once in 100 years. The magnitude of the flood selected by a governmental agency for planning purposes (usually 50-year or 100-year) is referred to as the **selected** or **regulatory flood**.

The duration and extent of a rainstorm-river flood depend on the specific physical characteristics and conditions of the watershed and the intensity and duration of the storm. Generally, in Ventura County, a flood builds up to a peak and then begins to recede, with the entire process lasting from an hour to a week, depending largely upon the size and slope of the watershed.

Flooding is a natural occurrence, with some long range beneficial effects such as replenishment of sand to beaches and of nutrients to agricultural lands. It is a hazard only because people find flood plains a desirable place to live and use. Human encroachment on flood plains can also increase the hazard: structures may obstruct the flood flow, thus increasing flood heights, and the covering of the ground with impervious surfaces (e.g., pavement) increases the rate and quantity of runoff.

The County's three major rivers (Santa Clara River, Ventura River, and Calleguas Creek) and all of their major tributaries, as well as many smaller channels, are located in unincorporated areas over much of their courses. The 100-year floodplain as defined by the Federal Emergency Management Agency (FEMA) is depicted on the Hazards Protection Maps.

Located in the 100-year flood plain of the Ventura River are the communities of Live Oak Acres, Casitas Springs and Hawthorne Acres. In addition, there are main sewer and water lines along much of the length of the Ventura River and San Antonio Creek. Most of the rest of the Ventura River watershed hazard area is undeveloped or in agriculture. The unincorporated parts of the Santa Clara River watershed flood plain are primarily in agriculture, with some undeveloped and industrially developed areas. A sewage treatment plant, along with some sewer and water lines, are located in the Calleguas Creek flood plain; otherwise, only agricultural or undeveloped land is within this flood plain.

The goals, policies and programs which apply to flood hazards areas are as follows:

2.12.1 *GOALS*

1. Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from flood hazards.

2. Design and construct appropriate surface drainage and flood control facilities as funding permits.

3. Prevent incompatible land uses and development within **flood plains**.

2.12.2 *POLICIES*

1. Land use in the **floodway** should be limited to open space, agriculture, or passive to low intensity recreational uses, subject to the approval of the County Flood Control District.

2. Within areas subject to flooding, the County shall require the recordation of a **Notice of** Flood **Hazard** or **dedication of a flowage easement** with the County Recorder for all divisions of land and **discretionary permits**.

3. **Development** shall be protected from a 100-year flood if built in the **flood plain** areas.

4. The design of any structures which must be constructed in **flood plain** areas as depicted on the Hazards Protection Maps (Figure 2) shall be governed by the County Flood Plain Management Ordinance and shall incorporate measures to reduce flood damage to the structure and to eliminate any increased potential flood hazard in the general area due to such construction.

2.12.3 *PROGRAMS*

1. The County Sheriff's Department Office of Emergency Services will continue to provide public education and evacuation notification and response information. It will also annually review and revise the Multihazard Functional Plan's Flood Hazard Contingency section.

2. Federal Flood Insurance Rate Map and **Floodway** Map information is maintained by the Public Works Agency.

3. The **flood plain** limits shall be reviewed annually, as required by Government Code Sec. 65302(a), by the Ventura County Flood Control District. All changes will be conveyed to the Planning Division which will process an amendment to the Hazards Protection Maps (Figure 2).

2.13 INUNDATION FROM DAM FAILURE

This section deals with the flooding which may occur as the result of structural failure of a **dam**. Structural failure may be caused by seismic activity, or by landslides flowing into a **reservoir**.

Lake Casitas and the Santa Felicia (Lake Piru) dams are the largest dams in the County. Bouquet Canyon Dam, Castaic Dam, Drinkwater Reservoir, Dry Canyon Dam, Elderberry Flood Basin, and Pyramid Dam in Los Angeles County are other large dams upstream within the Santa Clara River drainage system. Due to the locations of dams and watercourses in Ventura and Los Angeles Counties, **dam inundation** could occur in these areas: Santa Clara River Valley, Ventura River, Ojai Valley, Simi Valley and the Westlake area.

Other dams or reservoirs creating potential inundation problems include: Bard Reservoir (Wood Ranch), Ferro Debris Basin (Ventura County Flood Control District), Lake Eleanor, Lake Sherwood, Las Llajas Reservoir (Ventura County Flood Control), Las Virgenes Reservoir (Ventura County portion of Westlake), Matilija Dam (Ventura County Flood Control District), Potrero Dam (Westlake Village), Runkle Debris Basin (Ventura County Flood Control District), Senior Canyon Reservoir, Sinaloa Lake and Sycamore Canyon (Ventura County Flood Control District).

Because of existing development patterns and trends, particularly in the south half of the County, and the large amount of land area that is potentially subject to dam inundation, it would be infeasible to preclude future development from locating in dam inundation areas.

The goal, policies and program which apply to inundation from dam failure are as follows:

2.13.1 *GOAL*

Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from **inundation** by **dam** failure.

2.13.2 *POLICIES*

1. **Dam Inundation** Maps shall be maintained by the Sheriff's Department - Office of Emergency Services.

2. **Dams** shall be designed and located to ensure their safety from all maximum credible seismic events.

2.13.3 *PROGRAM*

The County Sheriff's Department Office of Emergency Services will annually review and revise the Dam Failure Conginency section of the Multihazard Functional Plan. The Office of Emergency Services will continue to provide public information on dam failure preparedness and response.

2.14 FIRE HAZARDS

Ventura County experiences fires of a variety of types: wildland, structural, chemical, petroleum, electrical, vehicle and other human-caused material fires. Each is unique in its source of fuel, area of ignition, and degree of hazard. The Ventura County Fire Protection District constantly monitors the fire hazard in the County. There are ongoing programs for investigation and alleviation of hazardous situations.

The fire hazards section focuses on the rural or wildland areas of the County. The **fire hazard area** extends into all areas where native brush can be found growing in pure natural stands, which is most common on undeveloped hillside areas. The extreme fire hazard zone includes all areas of high brush and woodland and all steep slopes regardless of vegetation. The following areas of the County are particularly hazardous due to the length of time since the last fire, the build-up of flammable brush, and vegetation and inaccessibility:

- Yerba Buena Road - Carlisle Canyon area,
- Lake Sherwood area,
- Sulphur Mountain,
- Matilija Canyon area,
- Los Padres National Forest and
- Santa Monica Mountains.

On the coast, the communities of La Conchita, Seacliff and Solimar and the south coast area abut the High Fire Hazard Area. The communities on the Ventura River, including Oak View, and Meiners Oaks and the community of Piru are also interspersed with, or are adjacent to, **high fire hazard areas.** Oil production and storage facilities are located in the fire hazard areas but are usually well protected.

The goals, policies and programs which apply to fire hazards are as follows:

2.14.1 *GOALS*

1. Minimize the risk of loss of life injury, damage to property, and economic and social dislocations resulting from fire hazards.

2. Ensure that **development** in **high fire hazard areas** is designed and constructed in a manner that minimizes the risk from fire hazards.

2.14.2 *POLICIES*

1. All **discretionary permits** shall be required, as a condition of approval, to provide adequate water supply and access for fire protection and evacuation purposes.

2. All **discretionary permits** in **Fire Hazard Areas** shall be conditioned to include fire-resistant vegetation, cleared fire breaks, or a long-term comprehensive fuel management program as a condition of approval. Fire hazard reduction measures shall be incorporated into the design of any project in a **Fire Hazard Area.**

3. New residential subdivisions shall provide not less than two means of access for emergency vehicles and resident evacuation. A deviation from this policy is only allowed when the proposed road conforms with the County Road Standards and when the proposed road is approved by the County Fire Chief.

4. All applicants for subdivisions, multi-unit residential complexes, and commercial and industrial complexes shall be required to obtain, prior to permit approval, certification from the Fire Protection District that adequate fire protection is available, or will be available prior to occupancy.

5. Regulations for clearance of vegetation around oil production facilities shall continue to be strictly enforced.

2.14.3 *PROGRAMS*

1. The County Fire Protection District is responsible for the prescribed burn program as mandated by the Vegetation Management Program (VMP) SB 1704, along with **fuel breaks** and other fire prevention measures.

2. The County Fire Protection District will continue to work cooperatively with the U.S. Forest Service, California Department of Forestry, adjacent county fire departments, and local city fire departments, towards managing wildland fires.

3. The County Fire Protection District will continue to revise, maintain, and make available to the Planning Division their historical burn area maps in conjunction with the State Division of Forestry.

4. The County Fire Protection District and Public Works Agency will continue to coordinate their street naming procedures with the cities in the County.

5. The Ventura County Sheriff's Department Office of Emergency Services will annually review and revise the County Multihazard Functional Plan's Wildland Fire Contingency section in conjunction with the County Fire Protection District. The Office of Emergency Services will continue to provide public information on emergency response notification, evacuation and sheltering due to fire.

2.15 HAZARDOUS MATERIALS AND WASTE

Hazardous Material means any material that because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include hazardous substances, hazardous waste, and any material which a handler or the administration agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. Such material may be classified as poisons, corrosive chemicals, flammable materials, explosives and oxidizers and reactive materials or substances when tested in accordance with the State mandated criteria.

Hazardous Waste means any waste or combination of wastes, which because of its quantity, concentration, physical or chemical, infectious characteristics, (a) may either cause or significantly contribute to serous illness or death or an increase in serious irreversible or incapacitating reversible, illness, or (b) may pose a substantial present or potential threat to human health or the environmental when improperly managed. These substances may be poisons, corrosive chemicals, flammable materials, explosives and oxidizers and reactive materials or substances when tested in accordance with State mandated criteria.

The basic difference between wastes and materials is the intended use. Hazardous material becomes hazardous waste when the material has been used for its original intended purpose and is now going to be discarded or recycled. In some cases, waste at one facility can be used as a raw material at another facility. In those cases, the material would be regulated under the hazardous material regulations, and not the hazardous waste regulations.

The Countywide Emergency Response Plan, which is continuously being updated, identifies specific actions to be taken and the resources available for the protection of public health and the environment in the event of accidental and/or illegal release of hazardous substances.

Several catastrophic incidents over the past 20 years involving human illnesses, loss of life and environmental destruction caused by hazardous materials and wastes, as well as gradual long term groundwater pollution from leaking dumps and tanks, have led to the enactment of hundreds of Federal and State laws which place limits and prohibitions on the way hazardous wastes are managed from the point of generation to the point of disposal. Increased regulatory requirements and the increased costs associated with the proper disposal of all classifications of waste has led to illegal disposal operations countywide. The County Planning Division has inventoried all past and current waste disposal

sites which may pose health or land use problems by adversely affecting land, water or air resources.

Proposition 65, approved by the voters in 1986, became operative January 1, 1987. Among other things it adds §25180.7 to the Health & Safety Code. Specifically, it requires each designated employee to disclose to the Board of Supervisors and to the local Health Officer any illegal discharge or threatened illegal discharge of a hazardous waste within the County of which the employee obtains knowledge in the course of his or her employment and which the employee knows is likely to cause substantial injury to the public health or safety.

Under Assembly Bill 2948 (Tanner, 1986), counties within California were required to prepare a County Hazardous Waste Management Plan (CHWMP). Ventura County's CHWMP was approved by the State Department of Health Services in January 1990. The purpose of the CHWMP is to serve as the primary planning document for hazardous waste management in the County. The plan can be obtained from the County Solid Waste Management Department.

The goals, policies and programs which apply to hazardous materials and waste are as follows:

2.15.1 *GOALS*

1. Minimize the risk of loss of life, injury, serious illness, damage to property, and economic and social dislocations resulting from the use, transport, treatment and disposal of **hazardous materials and wastes.**

2. Locate potentially **hazardous facilities** and operations in areas that would not expose the public to a significant risk of injury, loss of life, or property damage.

2.15.2 *POLICIES*

1. **Hazardous wastes and materials** shall be managed in such a way that waste reduction through alternative technology is the first priority, followed by recycling and on-site treatment, with disposal as the last resort.

2. Site plans for **discretionary development** that will generate **hazardous wastes** or utilize **hazardous materials** shall include details on **hazardous waste** reduction, recycling and storage.

3. Any business that handles a **hazardous material** shall establish a plan for emergency response to a release or threatened release of a **hazardous material.** The County Fire Protection District is designated as the agency responsible for implementation of this policy.

4. Applicants shall provide a statement indicating the presence of any **hazardous wastes** on a site, prior to development. The applicant must demonstrate that the **waste site** is properly closed, or will be closed before the project is inaugurated.

5. Commercial or industrial uses which generate, store or handle **hazardous waste** and/or **hazardous materials** shall be located in compliance with the County Hazardous Waste Management Plan's siting criteria.

2.15.3 *PROGRAMS*

1. To assure that the use of **hazardous materials** are in compliance with Federal, State and local safety provisions, the County Fire Protection District and Environmental Health Division will continue to limit and control the manufacture, storage and use of **hazardous wastes** and **materials** in the County through the development review process.

2. The County Environmental Health Division is responsible for the following on-going programs involving **hazardous materials** and **waste:**

   - o Monitor underground tanks to ensure that groundwater supplies are free from the intrusion of **hazardous materials** from that source.

   - o Respond to reports of suspected and known illegal dumping of wastes and coordinate with the District Attorney's Office in enforcement and the prosecution of known offenders.

   - o Maintain an emergency response program to deal with **hazardous waste** spills in conjunction with the Sheriff's Department, Fire Protection District, Highway Patrol and all city fire and law enforcement departments.

   - o Inspect all **hazardous wastes** generators to ensure that such wastes are properly stored and disposed of in accordance with State and local ordinances and regulations.

3. The 1986 "Right To Know Law" requires a plan for response to the release or threatened release of a **hazardous material** (California Health & Safety Code Section 25503.(c)). The County Fire Protection District shall be responsible for preparation, coordination and implementation of this plan.

4. County Health and Safety/Loss Prevention (General Service Agency) is responsible for monitoring **hazardous materials** in the work place for all County employees through the Hazardous Materials Abatement Program.

5. The County Agricultural Commissioner's Office is responsible for enforcing all pesticide regulations, issuing licenses to applicators, distributors and dealers who handle pesticides and conducting inspections of all application and distribution facilities.

6. The County Environmental Health Division will continue to work with the appropriate State agencies to assess the public health and environmental impacts of identified waste disposal sites in the County, including abandoned and illegal sites.

7. The County Sheriff's Department Office of Emergency Services, in cooperation with the County Fire Protection District will annually review and revise the County Multihazard Plan's Major Hazardous Materials Incident Contingency section.

8. The County Solid Waste Management Department will maintain a County Hazardous Waste Management Plan that includes goals, policies, programs and an implementation schedule for management of **hazardous waste** for action by the County and the ten cities.

9. The County Sheriff's Department Office of Emergency Services, will coordinate with local, State and Federal agencies regarding off shore oil incidents and annually update the County Multihazard Functional Plan's Off Shore Oil Incidents Contingency section.

10. The Environmental Health Division is responsible to implement the requirements of Division 20, Article 8, Section 25180.7[c] (Health and Safety Code), involving any illegal discharge or threatened illegal discharge of a **hazardous waste** within the County.

11. The Solid Waste Management Department and the Environmental Health Division will continue to coordinate with the Ventura Regional Sanitation District and local cities on the Household Hazardous Waste Program, which involves a) the collection of unused household products and pesticides that are considered hazardous, and b) a

community education program on the safe use and disposal of household chemical products.

2.16 NOISE

For purposes of this Plan, "noise" can be defined as any sound whose intensity (in terms of volume, pitch or duration) at the point of human perception has the potential to stress or damage the organs of human hearing or to cause unwanted or unhealthy physiological effects, or is otherwise considered unwanted or annoying by the listener. The effects of noise accumulate over time, so it is necessary to deal not only with the intensity of sound but also the duration of human exposure to the sound.

Noise can be annoying and physically harmful to human beings and to animals. Human exposure to intense noise can result in irreversible hearing damage, and has been linked to other physiological effects including headaches, nausea, irritability, constriction of peripheral blood vessels, changes in heart and respiratory rates and in glandular and gastrointestinal activity and increased muscular tension. The effects of noise exposure in residential environments can include coughs and hoarseness caused by the strain of shouting above the noise. Noise can also affect accuracy at work, and has been found to be linked to job-related accidents and absenteeism.

High levels of noise can have effects on animals that are similar to those on humans, in terms of tissue damage, changes in blood pressure and chemistry, and hormonal changes. Hatching failures (in birds) and other changes in reproductive processes have also been reported. Additional effects on wildlife can include panicking, disruption of breeding and nesting behavior, birth defects, changes in migratory patterns, and even changes in the size of bodily organs. Noise can also mask animals' auditory signals and interfere with some animals' communication of necessary information. Adverse effects of noise on farm animals can include changes in milk production, incubation behavior, mating behavior, and animal size and weight.

Noise can also have adverse effects on materials and structures, particularly as a result of sonic booms and related aircraft noises. These aircraft generated noises can excite buildings to vibrate and can break windows and crack plaster.

While any number of individual measures have been proposed, mitigation measures for identifiable noise problems fall into three categories:

- Reduction of the noise at its source.
- Modification of the path of the noise.
- Reduction of noise at the receiver with various types of insulation.

Noise is directly associated with human activity, and is primarily a function of traffic, machinery and airports. On a generalized basis, motor vehicles, as a group, are the most pervasive contributors to urban noise, while aircraft, railroads and certain high intensity industrial noise generators may produce the most aggravated community annoyance reactions. Due to wide distribution and the types of machinery used, industrial sources are the second greatest noise generator. Airports are regarded as the third greatest noise generator. Other significant noise sources are powered gardening equipment, amplified music, power tools and air conditioners.

Land uses considered **noise sensitive uses** include residential, educational, and health facilities, research institutions, certain recreational, and entertainment facilities (typically, indoor theaters and parks for passive activities) and churches. Uses considered less sensitive to noise include commercial, and industrial facilities and certain noise-generating recreational facilities such as playgrounds and gymnasiums.

The goal, policies and programs that apply to noise are as follows:

2.16.1 *GOAL*

To protect the health, safety and general welfare of County residents by elimination or avoidance of adverse noise impacts on existing and future **noise sensitive uses.**

2.16.2 *POLICIES*

1. All **discretionary development** shall be reviewed for noise compatibility with surrounding uses. Noise compatibility shall be determined from a consistent set of criteria based on the standards listed below. An acoustical analysis by a qualified acoustical engineer shall be required of **discretionary developments** involving noise exposure or noise generation in excess of the established standards. The analysis shall provide documentation of existing and projected noise levels at on-site and off-site receptors, and shall recommend noise control measures for mitigating adverse impacts.

   (1) **Noise sensitive uses** proposed to be located near highways, truck routes, heavy industrial activities and other relatively continuous noise sources shall incorporate noise control measures so that:

      a. Indoor noise levels in habitable rooms do not exceed CNEL 45.

      b. Indoor noise levels in bedrooms do not exceed 60 dB(A) maximum.

      c. Outdoor noise levels do not exceed CNEL 60 or $L_{eq}1H$ of 65 dB(A) during any hour.

   (2) **Noise sensitive uses** proposed to be located near railroads shall incorporate noise control measures so that:

      a. Guidelines a and b above are adhered to.

      b. Outdoor noise levels do not exceed L_{10} of 60 dB(A).

   (3) **Noise sensitive uses** proposed to be located near airports:

      a. Shall be prohibited if they are in a CNEL 65 or greater, noise contour.

      b. Shall be permitted in the CNEL 60 to CNEL 65 noise contour area only if means will be taken to ensure interior noise levels of CNEL 45 or less.

   (4) Noise generators proposed to be located near any **noise sensitive use** shall incorporate noise control measures so that outdoor noise levels at the noise receptor do not exceed:

      a. $L_{eq}1H$ of 55dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.

      b. $L_{eq}1H$ of 50dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m.

      c. $L_{eq}1H$ of 45dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.

2. Discretionary development which would be impacted by noise or generate noise which cannot be reduced to meet the standards prescribed in Policy 2.16.2-1., shall be prohibited. This policy does not apply to noise generated during the construction phase of a project if overriding considerations are adopted by the decision-making body.

3. The priorities for noise control shall be as follows:

   (1) Reduction of noise emissions at the source.

   (2) Attenuation of sound transmission along its path, using barriers, landforms modification, dense plantings, and the like.

   (3) Rejection of noise at the reception point via noise control building construction, hearing protection or other means.

4. The Building and Safety Division shall continue to enforce Appendix Chapter 35 of the Uniform Building Code (UBC) and UBC Appendix 3501 of the Ventura County Building Code for the purposes of protecting persons within new hotels, motels, apartment houses, and dwelling units from effects of excessive noise including external community noise.

2.16.3 ***PROGRAMS***

1. The Oxnard and Camarillo Airport Master Plans recommend the preparation of noise abatement plans, the formation of local noise abatement committees with input from local citizens, and distribution of a periodic newsletter documenting noise abatement policies to aircraft operators and other interested parties. The airport plans also recommend periodic sampling measurements and updating of the CNEL noise model parameters, and discussion of alternative approaches for noise abatement.

   In addition, the Oxnard plan recommends publication of a map of recommended noise abatement flight tracks and operating procedures, for distribution to area airports and other interested parties.

2. The Public Works Agency will continue to work with CalTrans and City transportation offices to optimize signal timings and arterial stop sign location so that stop-go truck traffic is minimized in areas surrounded by noise-sensitive uses.

3. The noise **goals**, **policies** and **programs**, as well as the noise appendix, will be reviewed as part of the Planning Division's annual review of this General Plan.

4. The Public Works Agency will prepare a proposal for consideration by the Board of Supervisors to study the feasibility of constructing noise barriers in areas containing existing **noise sensitive uses** which are or will be significantly impacted by traffic noise.

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3. LAND USE

The purpose of the Land Use Chapter is to set **goals**, **policies** and **programs** to guide future growth and development in the unincorporated area of Ventura County in a manner consistent with State legal mandates and requirements and in a manner consistent with the goals and quality of life desired by Ventura County citizens. The **policies** of the Land Use Chapter provide the basis for all decisions related to the use of the land and the further expansion of the various communities within the County. They also provide the basis for the establishment of zoning and subdivision regulations, the review of capital improvement programs, the development of housing and redevelopment programs, and other programs related to land use.

In accordance with Section 65302(a) of the Government Code, the Land Use Chapter of the General Plan identifies the goals, policies and programs which guide the distribution, general location and extent of uses of land for housing, business, industry, open space, including agriculture, and other categories of public and private uses of land in the County. This Chapter also establishes the standards of population density and building intensity for various land use designations covered by the plan.

To avoid duplication of material presented in other chapters of this General Plan, not all of the issues listed in Section 65302(a) are included in this chapter. The goals, policies and programs which apply to natural resources and scenic beauty are addressed in the Resources Chapter. The goals, policies and programs which apply to areas subject to flooding are addressed in the Hazards Chapter. The goals, policies and programs which apply to solid and liquid waste disposal facilities, education, recreation, and other public buildings and grounds are addressed in the Public Facilities and Services Chapter.

This Chapter also includes the goals, policies, and programs governing **open space** as required by Sections 65302(e) and 65560 et seq. inclusive of the Government Code. Furthermore, this Chapter includes the goals, policies, and programs governing housing as required by Sections 65302(c) and 65580 et seq. of the Government Code.

The specific goals, policies and programs are listed under the major headings of General, Land Use Designations, Population and Housing, and Employment and Commerce/Industry. The official General Land Use Maps are not physically bound as part of this text, but are presented as companion materials accompanying the text. For reference purposes, these maps are identified as Figure 3.1.

The Land Use Appendix summarizes the land use designations, the acreages for each designation, and the corresponding population densities and building intensities for each. The tables in the Appendix include the land use designations for the incorporated and unincorporated areas for use in comprehensive Countywide programs such as air quality management, and water quality management planning, solid waste planning, transportation planning and housing planning. The tables are based on the General Land Use Map included in this Plan, as well as the currently-adopted land use plan maps from each city General Plan and currently-adopted County Area Plans.

3.1 GENERAL GOALS, POLICIES AND PROGRAMS

The following general goals, policies, and programs apply to land use:

3.1.1 *GOALS*

1. Ensure that the County can accommodate anticipated future growth and **development** while maintaining a safe and healthful environment by preserving valuable natural resources, guiding development away from hazardous areas, and planning for adequate public facilities and services. Promote planned, well-ordered and efficient land use and **development** patterns.

2. Promote the establishment of reasonable city boundaries and Spheres of Influence and prevent step-out urban **development.**

3. Promote appropriate and orderly growth and **development** while protecting desirable existing land uses and a desired quality of life.

4. Ensure that land uses are appropriate and compatible with each other, and guide **development** in a pattern that will minimize land use conflicts between adjacent land uses.

5. Ensure that Countywide growth and **development** is consistent with the **Guidelines for Orderly Development.**

3.1.2 *POLICIES*

1. *General Land Use Maps*: The **goals** and locational criteria set forth in this Chapter are general guidelines for determining whether land should be within a particular land use designation depicted on the General Land Use Maps (Figure 3.1). The land use designation applied to a specific parcel of land shall be as designated on the General Land Use Maps, whether or not such parcel meets all of the applicable criteria.

   The General Land Use maps cover the mainland only. Anacapa Island is designated "Open Space" and San Nicholas Island is designated "State or Federal Facility."

2. *Consistency of Zoning*: Zoning shall be consistent with the General Land Use Maps (Figure 3.1) and the Zoning Consistency Matrix (Figure 3.2). Where the zoning and subdivision criteria applicable to a particular land use category require a specific subzone, zoning shall be considered consistent with such land use category only if the specified subzone is adopted. To determine the appropriate zone and subzone designation (from among those consistent with the appropriate land use designation), the following factors shall apply:

   - Recognizing the desirability of retaining existing uses and densities on the subject land;
   - Recognizing the desirability of accommodating anticipated uses on the subject land;
   - Maintaining continuity with neighboring zoning designations, land uses and parcel sizes;
   - Implementing the recommendations of any specific zoning and land use studies of the area in question;
   - Recognizing and addressing the presence and significance of resources and hazards; and
   - Evaluating the ability to provide public services and facilities.

3. *Consistency of Land Use*: Any land use shall be deemed consistent with the General Plan if it is permitted under a zoning designation which is consistent with Policy Number 2 above, and if the land use does not conflict with any other policy of the County General Plan.

4. *Area Plans*: Plans for specific geographic subareas of the County may be adopted as part of the County General Plan. Area Plans shall be consistent with the General Land Use Map, although the Area Plans may be more specific. Figure 3.3 indicates the areas covered by the Area Plan maps.

5. *Building Intensity and Population Density*:

   - For Area Plans, the building intensity and population density standards which appear in each respective plan shall apply to lands covered by the Area Plan maps, except for affordable/elderly housing developments which are eligible for density bonuses as specified in Article 16 of the County Zoning Ordinance.

   - For Existing Communities (as defined and discussed in Section 3.2), the building intensity and population density standards shall be as specified on the tables which accompany each Existing Community map contained in this Chapter (Figures 3.7 through 3.22).

   - For all other unincorporated areas, the building intensity and population density standards shall be as specified in Figure 3.4.

6. *Minimum Parcel Size*: Except as provided below, subdivisions of land shall meet the minimum parcel size requirements established by Figures 3.1 and 3.2, by the applicable Zoning Compatibility Matrix established by the respective Area Plans or by Figures 3.7 through 3.22 (Existing Communities).

   - The suffix "Av" (for "average") may be added to any zone consistent with the above designations to allow individual lots within a subdivision to fall below the minimum parcel size requirements, provided that the collective average size of the parcels created meets the minimum size requirement, and provided that no individual parcel created is smaller in area than 80 percent of the minimum.

   - Affordable/Elderly Housing developments which are eligible for density bonuses as specified in Article 16 of the County Zoning Ordinance may be granted a reduction from the minimum parcel size requirements in accordance with the provisions of Article 16.

   - Parcels for public purposes such as, but not limited to, fire, police, water wells, flood control and other public health and safety facilities, are exempt from these minimum parcel size requirements.

7. *Nonconforming Parcel Size*: The use or development of a parcel which is a legal lot for the purposes of the County Subdivision Ordinance, but which fails to meet the minimum parcel size requirements of the applicable land use category, shall not be prohibited solely by reason of such failure. However, this policy shall not be construed to permit the subdivision of any parcel into two or more lots if any of the new lots fails to meet the minimum parcel size requirements.

8. *Interpretation of Boundaries*: Because of the scale of the General Land Use, Area Plan and Existing Community maps, it is not always possible to show boundaries of land use designations precisely enough to exactly represent property lines or geographic features. Where the precise location of boundaries depicted on the General Land Use, Area Plan or Existing Community Map is uncertain, the Planning Director is authorized to resolve the uncertainty. The Map lines or boundaries should follow natural or man-made boundaries. Where the scheme of the map in the immediate area in question is to follow a certain type of natural or man-made boundary, the uncertainty should be resolved consistently with that scheme. The following list contains examples of natural or man-made boundaries:

   - water courses,
   - ridge lines,

- o toes of slopes,
- o lines marking changes in vegetation,
- o lines marking changes in slope,
- o parcel boundaries,
- o roads,
- o rail lines,
- o utility corridors,
- o lines separating different land uses,
- o lines marking the separation between a group of large lots from a group of small lots, and
- o lines marking features or designations referenced in the definitions and criteria of the various land use categories.

9. *Concurrent Processing*: Zone changes, if necessary, shall be processed concurrently with General Plan Amendments to assure zoning consistency.

10. *Variances*: Variances to minimum parcel size requirements and building intensity standards, height and setback standards applicable to a given property may be granted provided that all of the following conditions are met:

    (1) There are special circumstances or exceptional characteristics applicable to the subject property with regard to size, shape, topography, location, or surroundings, which do not apply generally to comparable properties in the same vicinity and land use designation;

    (2) Granting the requested variance will not confer a special privilege inconsistent with the limitations upon other properties in the same vicinity and land use designation;

    (3) Strict application of the minimum parcel size requirements and building intensity standards as they apply to the subject property will result in practical difficulties or unnecessary hardships inconsistent with the general purpose of such requirements and standards; and

    (4) The granting of such variances will not be detrimental to the public health, safety, or general welfare, nor to the use, enjoyment or valuation of neighboring properties.

    Any such variance shall be processed in the same manner and subject to the same standards as a variance respecting zoning regulations.

11. *Guidelines for Orderly Development*: **Discretionary development** shall be consistent with the **Guidelines for Orderly Development**.

3.1.3 *PROGRAMS*

Greenbelt Agreements: In order to maintain the integrity of separate, distinct cities and to prevent inappropriately placed development between city boundaries, some cities and the County have entered into joint **greenbelt agreements**. These agreements protect open space and agricultural lands and reassure property owners located within these areas that land will not be prematurely converted to uses which are incompatible with agriculture or open space uses. In addition, the **greenbelt agreements** reinforce the **County Guidelines for Orderly Development**. Traditionally, agreements have been executed as joint or co-adopted resolutions by mutually interested cities and, in cases where the County is a party to it, by the Board of Supervisors.

Greenbelt agreements have been adopted for the following areas:

- o between the cities of Ventura and Santa Paula,
- o between the cities of Santa Paula and Fillmore,

- between the cities of Oxnard and Camarillo,
- east of the City of Camarillo for the westerly portion of the Santa Rosa Valley, and
- Tierra Rejada Valley.

Additional **greenbelt agreements** should be considered by the County and the appropriate cities for the following respective areas:

- between Fillmore and the Los Angeles County Line (excluding the Community of Piru),
- Las Posas Valley,
- Hidden Valley,
- between Ventura and Oxnard,
- westerly of Oxnard to Harbor Blvd.,
- Upper Ojai Valley, and
- between Moorpark and Simi Valley north of Highway 118.

3.2 LAND USE DESIGNATIONS

Six basic land use designations are utilized on the General Land Use Map: *Urban, Existing Community, Rural, Agricultural, Open Space,* and *State and Federal Facilities.* In addition, the General Land Use Map includes an overlay designation of *Urban Reserve*. These designations are defined as follows:

- The *Urban* land use designation is utilized to depict existing and planned urban centers which include commercial and industrial uses as well as residential uses where the building intensity is greater than one dwelling unit per acre.

  This designation has been applied to all incorporated lands within a city's Sphere of Influence as established by the Local Agency Formation Commission (LAFCO), and unincorporated urban centers within their own Areas of Interest.

  - An *Unincorporated Urban Center* is an existing or planned community which is located in an Area of Interest where no city exists. The unincorporated urban center represents the focal center for community and planning activities within the Area of Interest. For example, the Community of Piru represents the focal center in the Piru Area of Interest.

  - An *Area of Interest* is a major geographic area reflective of community and planning identity. Within each Area of Interest there should be no more than one city or Unincorporated Urban Center, but there will not necessarily be a city or Unincorporated Urban Center in each Area of Interest. Figure 3.5 shows the current Area of Interest boundaries for the County.

  - A *Sphere of Influence*, as used in this General Plan, is an area determined by LAFCO to represent the "probable" ultimate boundary of a city (LAFCO also recognizes Spheres of Influence for special districts, which are not discussed in this Chapter). The adoption of Spheres of Influence is required by Government Code Section 56425.

- The *Existing Community* designation identifies existing urban residential, commercial or industrial enclaves located outside Urban designated areas. An Existing Community may include uses, densities, building intensities, and zoning designations which are normally limited to Urban designated areas but do not qualify as urban centers. This designation has been established to recognize existing land uses in unincorporated areas which have been developed with urban building intensities and urban land uses; to contain these enclaves within specific areas so as to prevent further expansion; and to limit the building intensity and land use to previously established levels.

- The *Rural* designation identifies areas suitable for low-density and low-intensity land uses such as residential estates of one acre or greater

parcel size and other rural uses which are maintained in conjunction with agricultural and horticultural uses or in conjunction with the keeping of farm animals for recreational purposes.

The designation of areas for Rural land uses is intended to accommodate the need for low density rural residential development, which, in conjunction with the higher density development of the Urban designated land uses, will provide a full range of residential environments.

The areas considered for inclusion in the Rural designation are existing clusters of rural development and areas deemed appropriate for future rural residential development.

- The *Agricultural* designation is applied to irrigated lands which are suitable for the cultivation of crops and the raising of livestock.

  Because of the inherent importance of agriculture as a land use in and of itself, agriculture is not subsumed under the Open Space land use designation, but has been assigned a separate land use designation.

- The *Open Space* designation encompasses land as defined under Section 65560 of the State Government Code as any parcel or area of land or water which is essentially unimproved and devoted to an open-space use as defined in this section, and which is designated on a local, regional or State open-space plan as any of the following:

  - Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

  - Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands not designated agricultural; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

  - Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

  - Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

  For purposes of the County General Plan, "open space" also includes the following:

  - Open space to promote the formation and continuation of cohesive communities by defining the boundaries and by helping to prevent urban sprawl.

  - Open space to promote efficient municipal services and facilities by confining urban development to defined development areas.

- The *State or Federal Facility* land use designation is included on the General Land Use Map to recognize Federal or State facilities, excluding

forest and park lands, over which the County has no or limited land use authority. Areas so designated include lands under Federal or State ownership on which governmental facilities are located.

- The *Urban Reserve overlay* designation is applied to all unincorporated land within a city's adopted Sphere of Influence. Although LAFCO has determined these areas to be appropriate for eventual annexation and urbanization, the Urban designation was not applied to all lands within the LAFCO sphere boundaries because it could result in urban development being permitted without annexation. Accordingly, unincorporated lands within spheres have been designated under this General Plan as Existing Community, Rural, Agricultural or Open Space. Under these designations, therefore, more intense development could not occur on affected lands until they are annexed.

The following goals and policies apply to land use designations:

3.2.1 *GOALS*

1. *URBAN*:

   (1) Recognize areas within the County planned for urban **development** which are currently incorporated or which are candidates for future incorporation.

   (2) Confine urban **development** to land in or adjacent to identified urban centers and maintain open space between urban areas.

   (3) Discourage outward expansion of urban **development** when suitable developable areas exist within identified urban centers.

2. *EXISTING COMMUNITY*:

   Recognize and confine existing urban enclaves which are outside Urban designated areas, even though the enclaves may include uses, densities, and zoning designations normally limited to Urban designated areas.

3. *RURAL*:

   Recognize and plan for low density rural residential and recreational **development**, while preserving resources, avoiding hazards, and providing adequate public facilities and services.

4. *AGRICULTURAL*:

   (1) Identify the **farmlands** within the County that are critical to the maintenance of the local agricultural economy and which are important to the State and Nation for the production of food, fiber and ornamentals.

   (2) Preserve and protect agricultural lands as a nonrenewable **resource** to assure their continued availability for the production of food, fiber and ornamentals.

   (3) Maintain agricultural lands in parcel sizes which will assure that viable farming units are retained.

   (4) Establish **policies** and regulations which restrict agricultural land to farming and related uses rather than other **development** purposes.

   (5) Restrict the introduction of conflicting uses into farming areas.

5. *OPEN SPACE*:

(1) Preserve for the benefit of all the County's residents the continued wise use of the County's renewable and nonrenewable resources by limiting the encroachment into such areas of uses which would unduly and prematurely hamper or preclude the use or appreciation of such resources.

(2) Acknowledge the presence of certain hazardous features which urban **development** should avoid for public health and safety reasons, as well as for the possible loss of public improvements in these areas and the attendant financial costs to the public.

(3) Retain open space lands in a relatively undeveloped state so as to preserve the maximum number of future land use options.

(4) Define urban areas by providing contrasting but complementary areas which should be left generally undeveloped.

(5) Recognize the intrinsic value of open space lands and not regard such lands as "areas waiting for urbanization."

6. *STATE AND FEDERAL FACILITIES*:

(1) Recognize lands devoted to governmental uses which are under the authority of the State or Federal government and over which the County has no effective land use jurisdiction.

(2) Encourage proper planning of governmental lands so that uses on these lands are compatible with existing and planned uses on adjacent privately owned lands.

7. *URBAN RESERVE*:

Acknowledge the interests of cities and recognize the LAFCO adopted Spheres of Influence as areas in which urbanization will occur under the cities' authority.

3.2.2 ***POLICIES***

1. *URBAN*:

(1) The Urban land use designation shall include existing incorporated lands within a city's Sphere of Influence, and unincorporated urban centers within their Areas of Interest. No more than one city or unincorporated urban center shall be designated within an adopted Area of Interest.

(2) The appropriate zoning, maximum residential building intensity, and the minimum parcel size consistent with the Urban land use designation for unincorporated land shall be that allowed by the adopted Area Plan.

2. *EXISTING COMMUNITY*:

(1) The Existing Community designation shall include existing unincorporated urban enclaves located outside cities and unincorporated urban centers.

(2) The Existing Community designation may recognize the range of zones present in the area, be they residential, commercial, or industrial, as well as the range of existing population densities and building intensities. The appropriate zoning, population densities, and building intensities shall be that allowed by the adopted Area Plan, or Existing Community Zoning Map (Figures 3.7 - 3.22) where no Area Plan exists. Because of the degree of specificity on the Existing Community Zoning Maps,

any zone change within an Existing Community covered by a Zoning Map shall require a General Plan amendment.

3. *RURAL*:

(1) Lands designated Rural are those located outside areas designated Urban or Existing Community which are deemed suitable and appropriate for low-density rural residential or recreational development.

(2) The smallest minimum parcel size consistent with the Rural land use designation is one acre. Subzones may require larger minimum parcel sizes.

4. *AGRICULTURAL*:

(1) The Agricultural land use designation shall primarily include lands which are designated as **Prime Farmlands, Farmlands of Statewide Importance** or **Unique Farmlands** in the State's Important Farmland Inventory (IFI), although land may not be designated Agricultural if small areas of agricultural land are isolated from larger blocks of farming land (in such cases, the agricultural land is assigned to the Open Space or Rural designation of the surrounding properties).

(2) The smallest minimum parcel size consistent with the Agricultural land use designation is 40 acres. Subzones may require larger minimum parcel sizes.

5. *OPEN SPACE*:

(1) Open Space should include areas of land or water which are set aside for the preservation of natural resources, including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays, and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and important watershed lands.

(2) Open Space should also include areas set aside for managed production of resources, including, but not limited to, forest lands, rangeland, agricultural lands not otherwise designated Agricultural; areas required for the recharge of groundwater basins; bays, estuaries, marshes, rivers, and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) Open Space should also include areas within which recreational activities can be pursued, including, but not limited to, areas of outstanding scenic, historic, and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(4) Open Space should also include areas of land or water which are set aside for public health and safety, thereby safeguarding humans and property from certain natural hazards, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs, and areas required for the protection and enhancement of air quality.

(5) Open Space should also include undeveloped natural areas surrounding urban-designated areas which have been set aside to define the boundaries of the urban-designated areas, to prevent urban sprawl, and to promote efficient municipal services and facilities by confining the areas of urban development.

(6) The smallest minimum parcel size consistent with the Open Space land use category is 10 acres. Subzones may require larger minimum parcel sizes.

(7) The minimum parcel size for Open Space properties contiguous with the Agricultural land use designation shall be 20 acres.

6. *STATE OR FEDERAL FACILITY*:

(1) The State or Federal Facility land use designation shall include State or Federally owned lands on which a significant governmental use is located, and which are under the control of the State or Federal government and, therefore, effectively beyond the land use jurisdiction of the County.

(2) Whenever land designated State or Federal Facility is transferred to a private party or another public entity, the land shall be redesignated to an appropriate land use designation through the General Plan Amendment process.

7. *URBAN RESERVE*:

(1) The Urban Reserve overlay designation shall be applied to all unincorporated land within a city's adopted Sphere of Influence.

(2) Applicants for General Plan amendments, zone changes, and **discretionary development** should apply to the appropriate city and shall be discouraged from applying to the County.

3.3 POPULATION AND HOUSING

State law requires the preparation of a Housing Element as part of a jurisdiction's General Plan [Government Code Section 65302(c)]. The Element is to consist of an identification and analysis of existing and projected housing needs, and a statement of **goals** (including quantified objectives), **policies**, and scheduled **programs** for the preservation, improvement and development of housing. It is also required to identify adequate sites for housing and to make adequate provision for the existing and projected needs of all economic segments of the County (Section 65583).

The guidelines adopted by the Department of Housing and Community Development are also to be considered in the preparation of the Housing Element (Section 65585). Periodic review of the Element is required to evaluate: (1) the appropriateness of its goals, policies and programs in contributing to the attainment of the State housing goals; (2) its effectiveness in attaining the County's housing goals and objectives; and (3) the progress of its implementation (Section 65588). The Population and Housing Section of the Land Use Chapter and Appendix of the County General Plan is intended to fulfill the requirements of State law regarding Housing Elements.

The following goals, policies and programs apply to population and housing:

3.3.1 *GOALS*

1. *Population and Dwelling Unit Forecasts*: Monitor the rate and distribution of growth within the cities and unincorporated area of the County, and ensure that the population and dwelling unit forecasts of the County General Plan are periodically updated and are consistent with the cities' and County's General Plans and the ability to provide adequate public facilities and services.

2. *Consistency with Public Facilities and Services Capacity*: Ensure that the rate and distribution of growth within the County does not exceed the capacity of public facilities and services to meet the needs of the County's population and to protect the public health, safety, and welfare.

3. *Housing Preservation*: Preserve the condition of the existing housing stock and the continuing affordability of currently affordable units:

   (1) Encourage the physical maintenance of the existing standard housing stock (28,140 units), especially mobile homes (1,591 units) in mobile home parks and multi-family rental units (2,991 units).

   (2) Assure, where feasible, the continued affordability of the existing affordable housing stock.

   (3) Assure, where feasible, that affordable housing in the Coastal Zone is replaced when demolished or converted.

4. *Housing Rehabilitation*: Improve the condition of existing substandard housing and housing otherwise in need of rehabilitation:

   (1) Continue and expand existing housing rehabilitation **programs**:

      o Initiate the rehabilitation of the dwelling units which do not have plumbing.

      o Identify additional "target areas" where rehabilitation of housing units would be beneficial.

   (2) Promote the improvement of housing by supporting existing energy conservation and weatherization **programs**.

5. *Housing Opportunities*: Increase housing opportunities for persons of all income levels, with special emphasis on low and moderate income persons, including the elderly, single-headed households, large families, farmworkers, handicapped and homeless:

   (1) Strive to attain and maintain at least a 2.54% market vacancy rate in both rental and ownership housing.

   (2) Promote 15,831 upper income housing units Countywide, and provide 1,489 privately constructed, upper income housing units in the unincorporated area of Ventura County between January 1988 and July 1994.

   (3) Promote 8,325 moderate income housing units Countywide, and provide 732 privately constructed, moderate income housing units in the unincorporated area of Ventura County between January 1988 and July 1994.

   (4) Promote 7,214 low income housing units Countywide, and provide 853 low income housing units in the unincorporated area of Ventura County between January 1988 and July 1994.

   (5) Promote 5,686 very low income housing units Countywide, and provide 623 very low income housing units in the unincorporated area of Ventura County between January 1988 and July 1994.

   (6) Facilitate the construction of housing which is suited to the needs of other low income groups (i.e., farmworkers, elderly, handicapped, single-headed families, large families or homeless) both Countywide and within the unincorporated areas of the County.

   (7) Assist low and moderate income households to purchase or rent homes.

(8) Provide affordable housing opportunities in the unincorporated areas of the Coastal Zone.

6. *Housing Diversity*: Promote a diversity of housing types, tenure, and price:

(1) Increase the number of multi-family rental units in areas which have a disproportionately high percentage of single-family housing units.

(2) Strive for an equal distribution of housing types and prices throughout the unincorporated County.

(3) Promote the utilization of manufactured homes in the unincorporated County.

7. *Housing Equality*: Promote housing opportunities for all persons regardless of race, religion, sex, marital status, age, ancestry, national origin, color, or socio-economic status:

(1) Attempt to eliminate discrimination in housing by supporting Federal, State and local fair housing laws and policies.

8. *Area Plans and Other County Policies*: Ensure that the Population and Housing Section of the County General Plan and new housing **developments** are consistent with the **goals**, objectives and **policies** of the various Area Plans and other County adopted plans and **policies**, and ensure that Area Plans are consistent with the **goals**, objectives and **policies** of the Population and Housing Section of the County General Plan.

9. *Housing Section Update*: Ensure that the Population and Housing Section of the County General Plan is kept current by updating population data on an ongoing basis by reassessing the **goals**, objectives and **policies** of the Population and Housing Section, and evaluating the effectiveness of the Section's **programs** every five years.

3.3.2 ***POLICIES***

1. *Use of Forecasts*: The population and dwelling unit forecasts (Figures 3.23 through 3.25) do not constitute absolute ceilings for growth in the various subareas of the County. However, they do constitute a framework for general growth patterns and provide a means of evaluating the cumulative effect of projects within each subarea and in the County as a whole. Any project or combination of projects which would cause the forecasts to be exceeded in a given forecast year of a given subarea shall be reviewed to ensure that growth does not exceed the capacity of the public facilities or public services. The purpose of the forecasts is not to impose artificial limits on the rate or form of growth, but to provide a logical basis for planning public facilities and services, and to assist public decision-making bodies in ensuring that public needs will be addressed and accommodated in a comprehensive and long-term manner.

2. *Housing Preservation*:

(1) Existing residentially developed neighborhoods shall not be designated under Area Plans to land uses which would eliminate or degrade the existing housing stock.

(2) Low and moderate income rental housing located in the Coastal Zone shall be replaced when four or more such units are converted or demolished.

(3) The County shall cooperate with the Area Housing Authority in its efforts to preserve the existing housing stock.

3. *Housing Rehabilitation*: The County shall coordinate its housing rehabilitation programs with those of other public and private agencies.

4. *Housing Opportunities and Diversity*:

(1) As Area Plans are developed or updated, they shall attempt to accomplish the following to encourage greater housing opportunities:

- o Increase density, where appropriate, to reduce the cost of land per unit.
- o Ensure an appropriate mix of residential densities (i.e., multi-family as well as single-family densities).
- o Redesignate, where appropriate, any commercial, industrial or public land which has been determined to be surplus, to a residential land use designation in order to increase the land available for housing.
- o Discourage the conversion of existing residentially developed or designated areas to other land uses.
- o Ensure that there is enough residential land to meet planned employment opportunities and that there is a balanced amount of commercial, industrial and residential land use designations.
- o Develop a Master Environmental Assessment or Environmental Impact Report for the area encompassed by the Area Plan which could reduce processing time associated with subsequent environmental documents for residential projects.

(2) The County shall give priority in providing housing assistance to those groups with demonstrated special needs, such as the elderly, handicapped, large families, single-headed households, farmworkers and the homeless.

(3) Surplus County-owned land shall be evaluated for its suitability for low income housing. If suitable, such land shall first be made available to the Area Housing Authority.

(4) The County shall continue to offer a 25% density bonus for those residential projects which provide a minimum of 20% of the units for lower income households; 10% of the units for very low income households or 50% of the units for senior households. These units should have a strict resale or rental control attached to them.

(5) The County shall continue to offer a 25% density bonus for condominium conversion projects which provide a minimum of 33% of the units to moderate income households or 15% of the units for lower income households. These units should have a strict resale control attached to them.

5. *Housing Equality*:

(1) The County shall continue to promote equal opportunity in the housing market for all persons regardless of race, color, religion, sex, age, marital status, ancestry or national origin, employment, physical condition, family size or other arbitrary factors.

(2) The County shall continue to encourage and support the enforcement of laws and regulations prohibiting discrimination in lending practices and the sale or rental of housing.

6. *Area Plans and Other County Policies*:

(1) As Area Plans are developed or updated, they shall be consistent with the **goals** and **policies** of the Housing Section of the County General Plan.

(2) The **goals**, objectives, and **policies** of the Area Plans and other adopted County plans and **policies** shall be considered at the time of permit application for housing **development**, especially with regard to the following:

- o Consistency with adopted regional population forecasts.
- o Balance of residential **development** with employment opportunities.
- o **Preservation** and **conservation** of natural resources and agricultural lands.
- o Recognition of environmental hazards and constraints.
- o **Preservation** and promotion of community character.
- o Availability of existing and planned infrastructure and urban services.

7. *Housing Section Update*: In accordance with State law, the Housing Section of the General Plan shall be revised every five years, or as necessary. The entire Housing Section and Land Use Appendix shall be reviewed as necessary to identify changes in the County's housing programs that may be appropriate based upon changing needs or priorities.

3.3.3 *PROGRAMS*

An attempt has been made not to duplicate **programs** under separate headings. For example, some **programs** which will provide "housing opportunity" would also add to "housing diversity", but have not been repeated. It is recommended, therefore, that all **programs** be reviewed to gain an understanding of how the **programs** interrelate and how, together, they will bring Ventura County closer to attaining its housing **goals** and objectives.

1. *Population and Dwelling Unit Forecasts*: The County Planning Division shall continue to update the population and dwelling unit forecasts of the County General Plan periodically, in consultation with the cities, and subject to the approval of the Board of Supervisors. The County General Plan shall be updated as necessary to incorporate the updated forecasts and to revise County **goals**, **policies**, and **programs** as necessary.

2. *Population and Dwelling Unit Monitoring Program*: The County Planning Division shall monitor population and dwelling unit growth to evaluate consistency of actual **development** patterns with adopted forecasts for the various subareas of the County. In cases where it appears that **discretionary development** would individually or cumulatively exceed the forecasts in a given subarea of the County, the Planning Division shall bring the information to the attention of the policy body.

3. *Housing Preservation*:

(1) The Resource Management Agency (Planning, Building and Safety, Environmental Health) shall continue the enforcement of zoning, building and safety and public health codes on a complaint or voluntary request basis, and shall improve the communication regarding these matters with the Area Housing Authority, in order to help preserve the existing housing stock.

(2) The Chief Administrative Office (Community Development/Special Projects Unit), with the help of the Resource Management Agency and the Area Housing Authority, shall continue the existing **program** to apply for CDBG Home and/or other funds to assist households with housing code violations (i.e. building and safety, fire, or public health) to repair, replace, or otherwise bring housing units into conformance with the code.

(3) The Planning Division shall continue the Mobile Home Park Rent Review Program to assure that the amount of rent does not increase more than set forth in the Mobile Home Park Rent Review Ordinance.

4. *Housing Rehabilitation Programs*:

(1) The Chief Administrative Office (Community Development/Special Project Unit and the City of San Buenaventura) shall continue existing housing rehabilitation **programs** and apply for additional State and Federal funds (HUD Section 8, CDBG, etc.) for the rehabilitation of owner and renter occupied housing units. The funds should be used to improve the following types of substandard units which are located in the unincorporated area of the County:

- o Units which are overcrowded.
- o Units which do not have plumbing.
- o Units in need of other physical improvements.
- o Units in need of weatherization.

(2) The Commission on Human Concerns shall continue its energy conservation, energy education, appliance repair or replacement, home weatherization and home rehabitation **programs** for existing eligible homeowners and renters housing units.

5. *Housing Opportunity and Diversity*:

(1) The Resource Management Agency and the Public Works Agency shall continue the ongoing **program** to review, evaluate and modify zoning and **development** standards, where appropriate, to reduce **development** costs. Priorities for review should be jointly established by the County and the building industry.

(2) The Chief Administrative Office (Community Development/Special Projects Unit) shall continue to administer the existing Mortgage Revenue Bond Financing Program and Multi-Family Bond Financing Program to provide low and moderate income housing in the County.

(3) The Chief Administrative Office shall continue to apply for Federal and State funds and grants to the fullest extent possible in order to develop affordable owner-occupied and rental housing for low and moderate income households, and for those with identified special needs (farmworkers, elderly, handicapped, homeless), and shall encourage and support other housing agencies and non-profit organizations concerned with

housing to apply for all available funds for low and moderate income households and for those with identified special needs.

Funds and grants which could be applied for include, but are not limited to the following:

HUD - Community Development Block Grant (CDBG) Program,
HUD - Home Investment Partnership Program,
HUD - Home Ownership and Opportunity for People Everywhere (HOPE) Program,
FmHA - Section 515,
FmHA - Sections 514/516,
FmHA - Section 523,
HCD - Farmworker Housing Grant Fund,
HCD - Homeownership Assistance Program,
HCD - Rental Housing Construction Program,
HCD - Rural Land Purchase Fund,
HCD - Urban, Rural Predevelopment Funds, and
CHFA - Rental Construction Assistance Program.

(4) The Area Housing Authority should continue the Housing Assistance Payments Program to provide subsidies to eligible low income renter households and the homeless.

(5) The Ventura County Homeless and Housing Coalition is a non-profit organization interested in and involved in housing and other services for the homeless. The Coalition will: (a) study the number of homeless persons in the County; (b) seek feasible and effective ways of housing them; and (c) research the funding sources available to deal with the problem; and (d) coordinate all agencies serving the homeless in the development of a shelter and housing plans.

(6) The Resource Management Agency (Planning Division) shall study alternative procedures for, and report back to the Board of Supervisors on, the deferment of processing fees (excluding EIRs) and improvement fees (e.g. Quimby, Flood Control, Sheriff, Fire, Water Service and Sanitation) for low and moderate income housing projects.

(7) The Resource Management Agency (Planning Division) will continue to implement the provisions of Article 16 of the County Zoning Ordinance, which establishes standards, regulations, density bonuses, and other incentives to encourage the construction of housing for the elderly, or housing affordable to households earning lower incomes.

(8) The Resource Management Agency (Planning Division) will continue to implement the provisions of Article 19 of the County Zoning Ordinance, which establishes standards, regulations, density bonuses, and other incentives to encourage condominiums affordable to lower and moderate income households.

(9) The Resource Management Agency (Planning Division) shall study and report back to the Board of Supervisors on the viability of utilizing a Housing Trust Fund to finance affordable housing activities, as part of the next update of the Housing Section of the General Plan.

(10) The Commission on Human Concerns shall continue the Ventura County Lease Assistance Revolving Loans and Grants Fund to provide loans and/or grants to low income individuals, families, senior citizens, handicapped or disabled persons who are either homeless of "at risk of becoming homeless".

6. *Housing Equality Programs*:

The Area Housing Authority should continue the Fair Housing Program to provide a full range of services including counseling and referral, affirmative action, publications relative to fair housing laws, and tenant-landlord rights.

7. *Housing Section Update*:

(1) The Planning Division shall continue to monitor housing and population trends, and periodically reassess the County's housing needs, objectives and implementation **programs**. Housing factors that should be monitored include:

- o Population increases and distribution.
- o Rental housing construction and vacancy rates.
- o Ownership housing construction and vacancy rates.
- o Employment generation and housing demand.
- o Current housing need by type, tenure and number.
- o Number of homeless persons and their distribution.
- o Land availability for the construction of low and moderate income housing.
- o Evaluation of Implementation Programs annually as required by the Government Code.

(2) The Planning Division shall prepare an update to the Housing Section of the General Plan as appropriate, but not less than every five years, to reflect the results of the periodic reassessment of the County's housing needs, objectives, and implementation **programs**.

3.4 EMPLOYMENT AND COMMERCE/INDUSTRY

Because commercial and industrial uses are generally considered as urban uses which require municipal services and public facilities, such uses are generally discouraged from locating in unincorporated areas. However, there are unincorporated areas within the County which have been designated as commercial or industrial, either in existing communities or identified urban centers.

The following goals, policies, and programs govern commercial and industrial activities and projects in unincorporated areas:

3.4.1 *GOALS*

1. Encourage adequate commercial facilities to develop within the incorporated cities, unincorporated urban centers and designated Existing Communities which provide the shopping, service and basic employment needs of County residents and area visitors in a manner compatible with adjacent residential development, public facilities, natural resource protection, environmental quality and high standards of urban design.

2. Provide for the orderly distribution of employment opportunities within the County commensurate with housing opportunities.

3.4.2 *POLICIES*

1. Commercial development shall be located in the County's incorporated cities, unincorporated urban centers, or designated Existing Communities, which provide maximum access to the public, and where appropriate services and facilities can be provided to accommodate such **development**.

2. Retail sales and service type commercial and office facilities should locate in shopping centers or established commercial areas.

3. Commercial and industrial areas shall be designed to be generally compact, grouped and consolidated into functional units providing for sufficient off-street parking and loading facilities, maximizing pedestrian and vehicle safety, and minimizing the impacts on traffic congestion.

4. Commercial and industrial developments shall be designed to provide adequate buffering (e.g, use of walls, landscaping, setbacks), and on-site activities (e.g., hours, scheduling of deliveries) shall be regulated to minimize adverse impacts (e.g., noise, glare, odors) on adjoining residential areas.

5. Industrial development shall be located within city or existing unincorporated industrial parks which have the necessary facilities and services to support most industrial **development**.

6. All commercial and industrial **development** applications located within a city's Sphere of Influence shall be referred to the city for possible annexation.

7. Industrial uses shall be designed and conducted in a manner that is compatible with surrounding land uses such that potential impacts are mitigated to less than significant levels, or, where no feasible mitigation measures are available, a statement of overriding considerations shall be adopted.

8. As Area Plans are prepared or updated, planned industrial and commercial areas shall be evaluated to assess the impact on jobs/housing balance within the region.

3.4.3 *PROGRAMS*

1. As necessary, the County Planning Division shall review, amend and enforce performance standards contained within zoning regulations.

2. The Planning Division will initiate a **program** to monitor commercial and industrial **development** and to estimate current employment levels.

FIGURE 3.2a

GENERAL PLAN

ZONING COMPATIBILITY MATRIX

NON-COASTAL ZONES

PLAN MAP LAND USE DESIGNATION \ ZONE	O-S (10 AC. MIN.)	A-E (40 AC. MIN.)	R-A (1 AC. MIN.)	R-E (10,000* MIN.)	R-O (20,000* MIN.)	R-1 (6,000* MIN.)	R-2 (3,500*/DU)	R-P-D	S-P	T-P	C-O	C-1	C-P-D	M-1	M-2	M-3
OPEN SPACE (10 AC. +)	○	○								○						
AGRICULTURE (40 AC. +)		○								○						
RURAL (1 AC. +)			○	(1AC)	(1AC)											
EXISTING COMMUNITY			○	○	○	○	○	○			○	○	○	○	○	○
URBAN	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
STATE/FEDERAL FACILITY	(40 AC)															

OPEN SPACE INTERPRETATIONS - Open Space Interpretations granted prior to May 17, 1983, and permitting parcel sizes less than those specified in this Plan, shall be considered consistent with this Plan. Furthermore, zoning which is consistent with the purpose and intent of these Open Space Interpretations shall be considered consistent with this Plan.

□ NOT COMPATIBLE WITH PLAN

○ COMPATIBLE WITH PLAN

(7U) COMPATIBLE ONLY WITH ZONE SUFFIX EQUAL TO OR MORE RESTRICTIVE THAN THAT SHOWN IN THE CIRCLE

(X AC) = X ACRE MINIMUM LOT SIZE

(X) = X THOUSAND SQUARE FEET MIN. LOT SIZE

(X U) = X UNITS PER ACRE MAXIMUM

REVISED 7-12-84

FIGURE 3.2b

GENERAL PLAN

ZONING COMPATIBILITY MATRIX

COASTAL ZONES

PLAN MAP LAND USE DESIGNATION \ ZONE	C-O-S (40 AC. MIN.)	C-A (40 AC. MIN.)	C-R (1 AC. MIN.)	C-R-E (20,000* MIN.)	C-R-1 (7,000* MIN.)	C-R-2 (3,500*/DU)	R-B (3,000* MIN.)	R-B-H (1,750* SQ. FT. 1,250*/DU)	C-R-P-D	C-C	C-M	H-P-D
OPEN SPACE (10 AC. +)	○	○										
AGRICULTURE (40 AC. +)		○										
RURAL (1 AC. +)			○	(1AC)								
EXISTING COMMUNITY			○	○	○	○	○	○	○	○	○	○
URBAN				○	○	○	○	○	○	○	○	○
STATE/FEDERAL FACILITY	(40 AC)											

□ NOT COMPATIBLE WITH PLAN

○ COMPATIBLE WITH PLAN

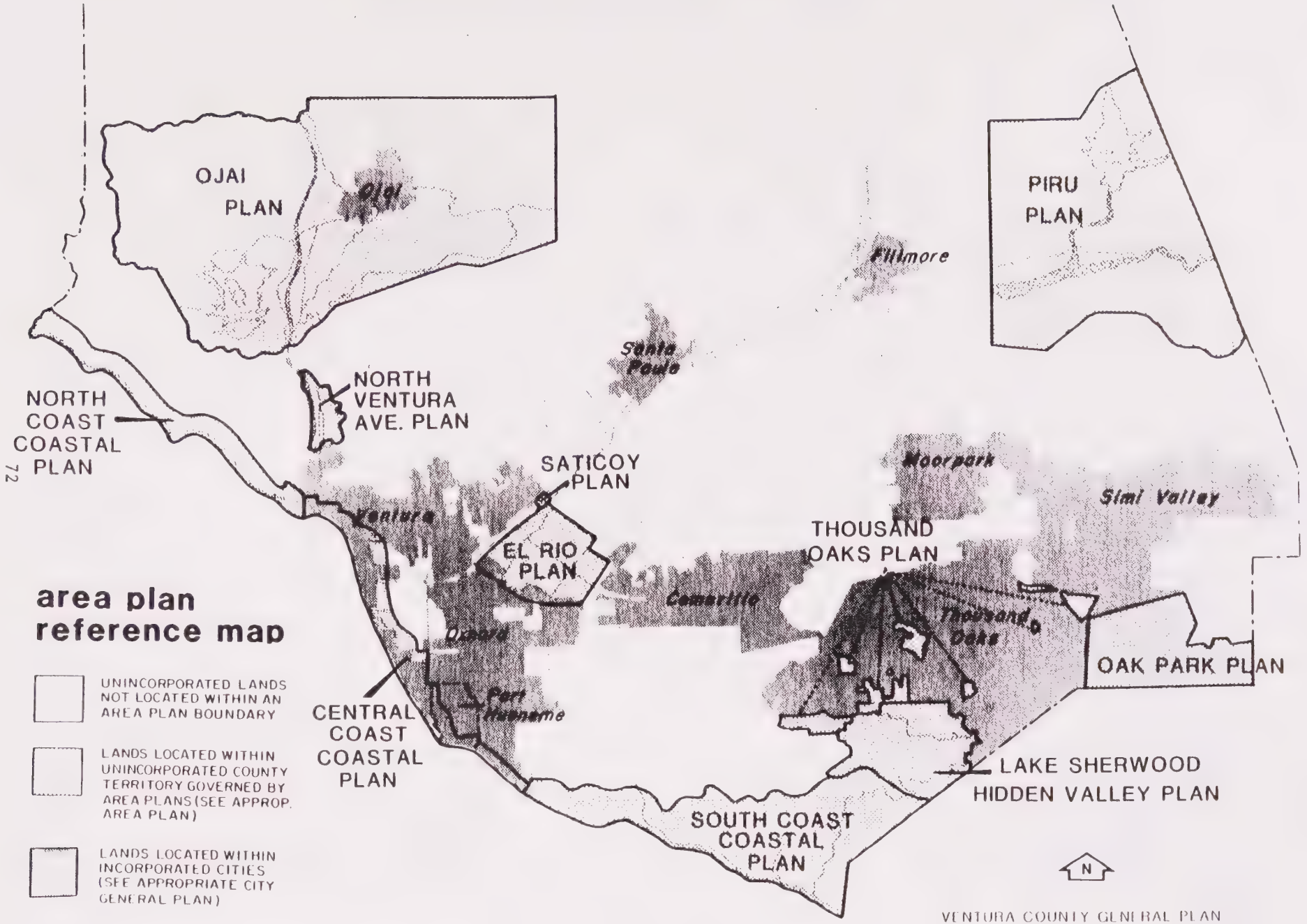
(7U) COMPATIBLE ONLY WITH ZONE SUFFIX EQUAL TO OR MORE RESTRICTIVE THAN THAT SHOWN IN THE CIRCLE.

(X AC) = X ACRE MINIMUM LOT SIZE

(X) = X THOUSAND SQUARE FEET MIN. LOT SIZE

(X U) = X UNITS PER ACRE MAXIMUM

REVISED 7-12-84



VENTURA COUNTY GENERAL PLAN

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.3
Rev. 3-24-92

FIGURE 3.4

GENERAL RESIDENTIAL BUILDING INTENSITY STANDARDS/POPULATION DENSITY RANGE

DESIGNATION	RURAL	OPEN SPACE	AGRICULTURE
1. Acres[1] (From General Land Use Maps)	3,006	250,800	75,950
2. Low Range DU's/Ac[2] (Policy Standard)	1 DU/5Ac	1 DU/160Ac	1 DU/640Ac
3. High Range DU's/Ac[2] (Policy Standard)	1 DU/Ac	1 DU/10Ac	1 DU/40Ac
4. Low Range DU's (Line 1 times Line 2)	601	1,567	118
5. High Range DU's (Line 1 times Line 3)	3,006	25,080	1,898
6. Average Pop/DU (Year 2010 Forecast for Nongrowth Areas)	2.56	2.56	2.56
7. Low Range Population (Line 4 times Line 6)	1,538	4,011	302
8. High Range Population (Line 5 times Line 6)	7,695	64,204	4,858
9. Low Range Pop/Acre (Line 7 divided by Line 1)	0.512	0.016	0.004
10. High Range Pop/Acre (Line 8 divided by Line 1)	2.560	0.256	0.064
11. Maximum Building Coverage[3] (Percent of Lot Area)	25%[4]	5%[5]	5%[5]

FOOTNOTES

[1] Excludes acreage from Area Plans and Existing Communities.

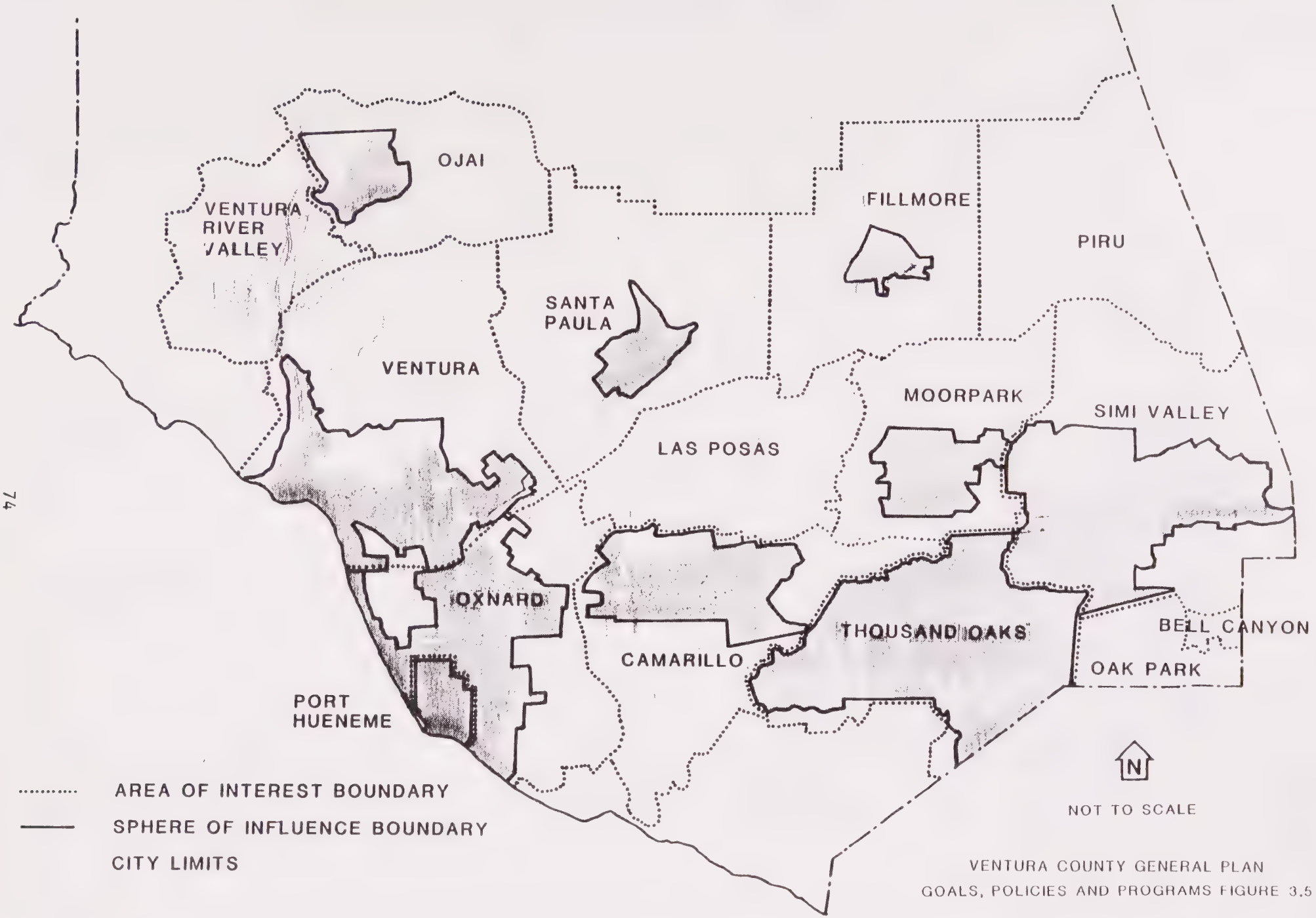
[2] Excludes second dwelling units (in accordance with State Government Code Section 65852.2) and farmworker dwellings.

[3] Excludes greenhouses, hothouses, and the like.

[4] For nonconforming lots, maximum **building coverage** shall be 2,500 square feet, plus 1 square foot of building area for each 4.6 square feet of lot area over 5,000 square feet.

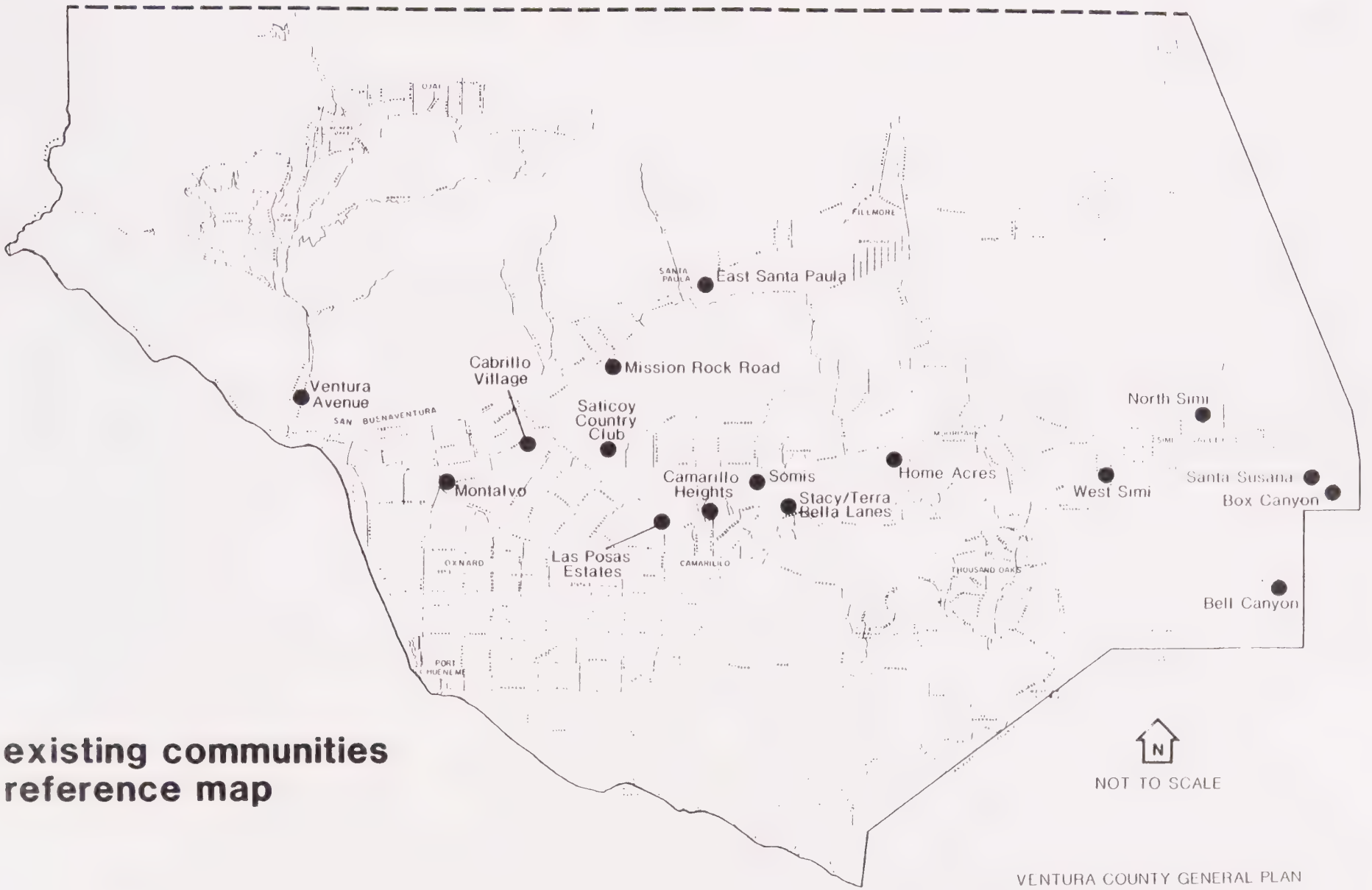
[5] For nonconforming lots, maximum **building coverage** shall be 2,500 square feet, plus 1 square foot for each 22.3 square feet of lot area over 5,000 square feet.

R. 7/12/94



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.5

Revised 12/11/90

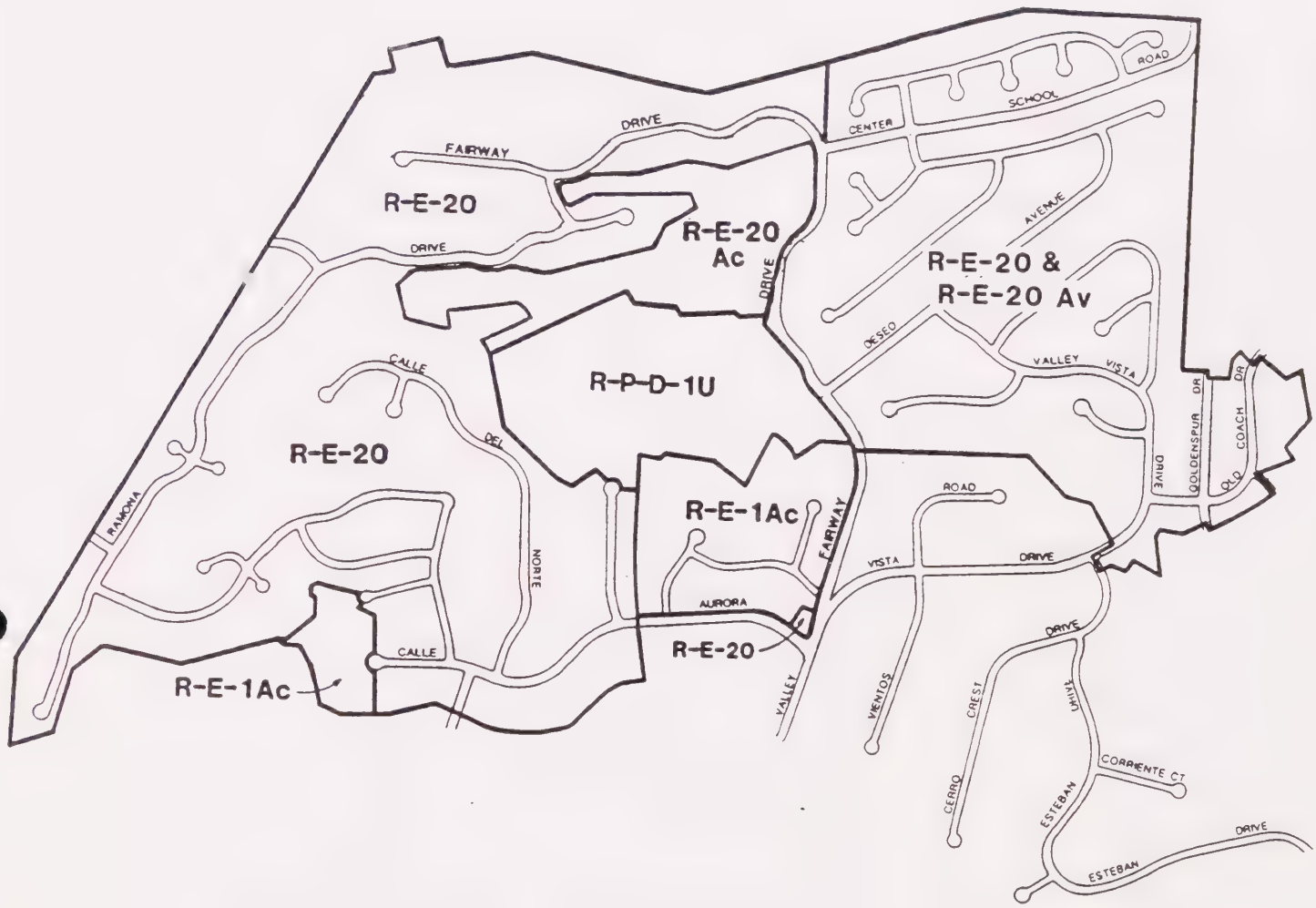


existing communities reference map

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.6

Rev. 3-24 92

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R.7/12/94

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.7

LAS POSAS ESTATES

EXISTING COMMUNITY

FIGURE 3.7
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

LAS POSAS ESTATES COMMUNITY

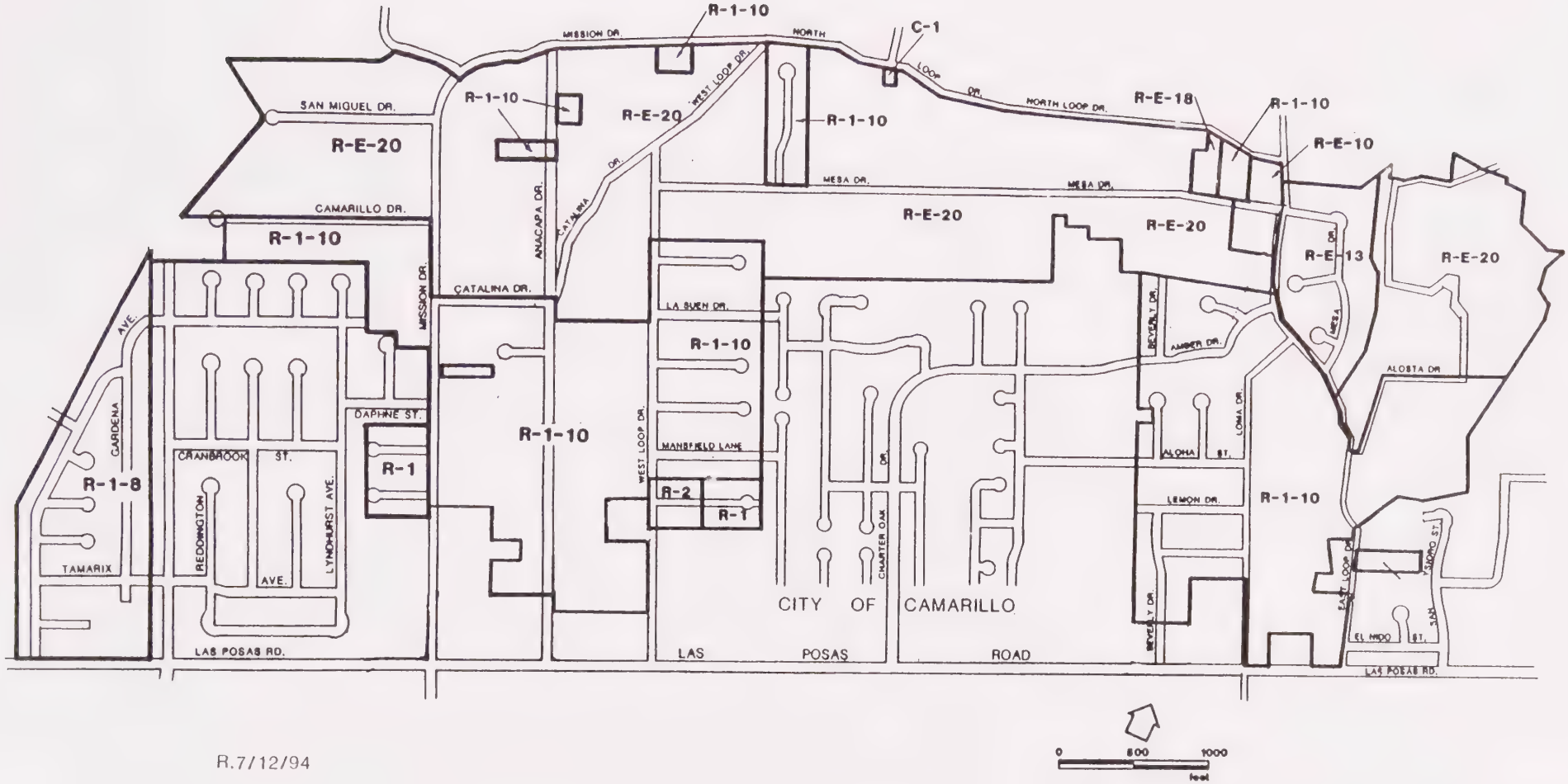
RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-20Ac	13.0	5%***	0.05	1	2.52	3	0.08
R-E-1Ac	28.0	25%	1.00	27	2.52	68	2.43
R-E-20 and R-E-20Av	269.0	29%	2.18	586	2.52	1,476	5.49
R-P-D-1U	45.0	25%	1.00	45	2.52	113	2.51
	355.0			659		1,660	

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Camarillo Growth Area
***Excludes greenhouses, hothouses, and the like.

Ventura County General Plan
Goals, Policies, and Programs

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R.7/12/94

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.8

CAMARILLO HEIGHTS

EXISTING COMMUNITY

FIGURE 3.8
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

CAMARILLO HEIGHTS COMMUNITY

RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-1Ac	353.9	25%	1.00	353	2.52	891	2.52
R-E-10	6.8	36%	4.36	29	2.52	73	10.74
R-E-13	13.0	33%	3.35	43	2.52	108	8.31
R-E-18	1.0	30%	2.42	2	2.52	5	5.00
R-E-20	143.2	29%	2.18	312	2.52	786	5.49
R-1	6.0	45%	7.26	43	2.52	108	18.00
R-1-8	27.0	39%	5.45	147	2.52	370	13.70
R-1-10	113.7	36%	4.36	495	2.52	1,247	10.97
R-2	2.0	50%	12.45	24	2.52	60	30.00
	666.6			1,448		3,648	

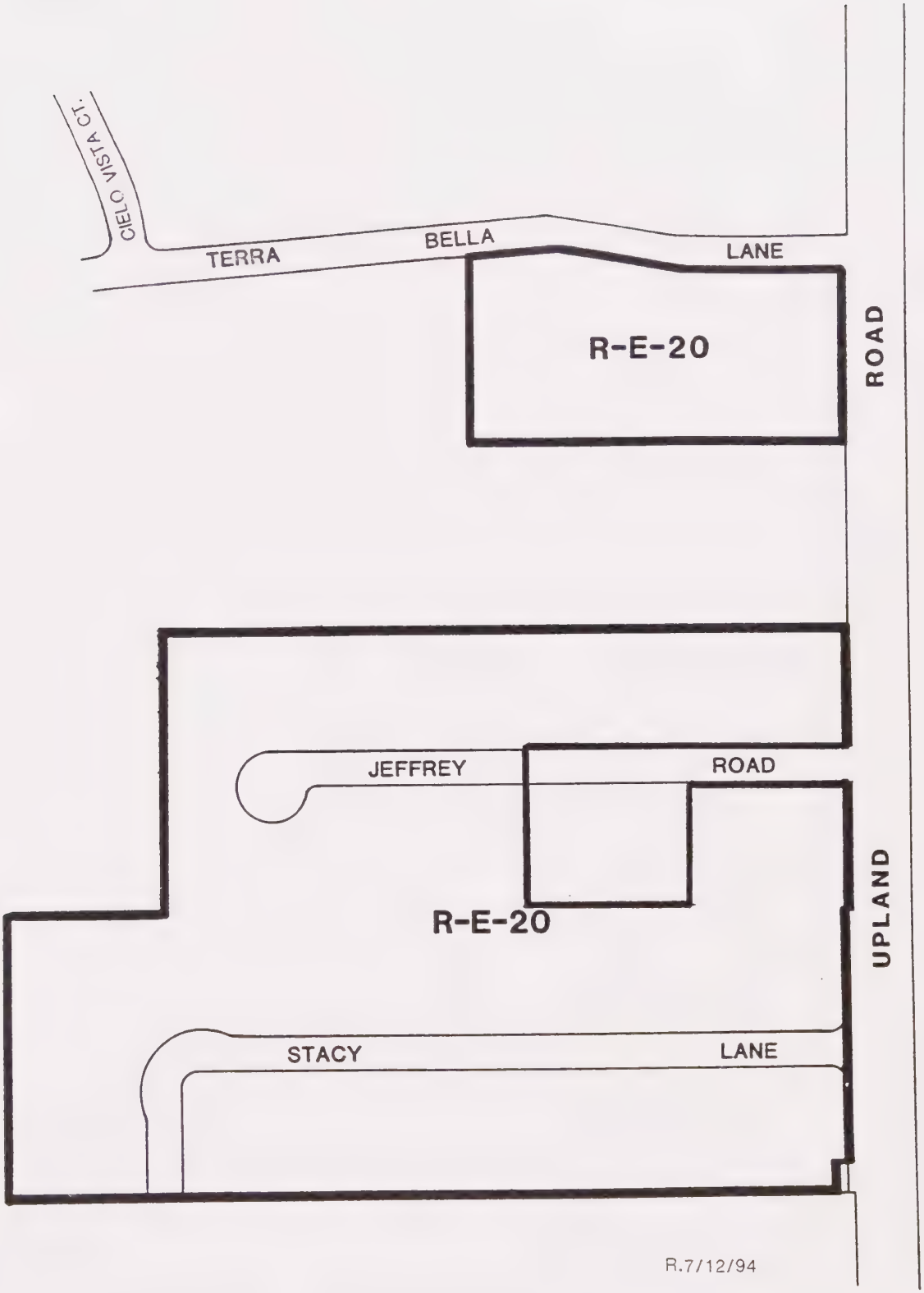
COMMERCIAL/INDUSTRIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Projected Floor Area (x1000 SF)	Average Employees/ 1000 SF	Employees	Average Employees/ Acre
C-1	0.2	60%	1.3	2.0	3	15.0

*Excludes second dwelling units per Section 65852.2 of the State Government Code
**Year 2000 Forecast for Camarillo Growth Area

Ventura County General Plan
Goals, Policies, and Programs

R.7/12/94







VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.9

STACY/TERRA BELLA LANES

FIGURE 3.9
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

STACY/TERRA BELLA LANES COMMUNITY

RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-20	17.1	29%	2.18	37	2.52	93	5.44

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Camarillo Growth Area

MATCH LINE TO NORTH HALF

VENTURA COUNTY GENERAL PLAN

GOALS, POLICIES AND PROGRAMS

FIGURE 1 – SOUTH HALF
RESOURCE PROTECTION MAP

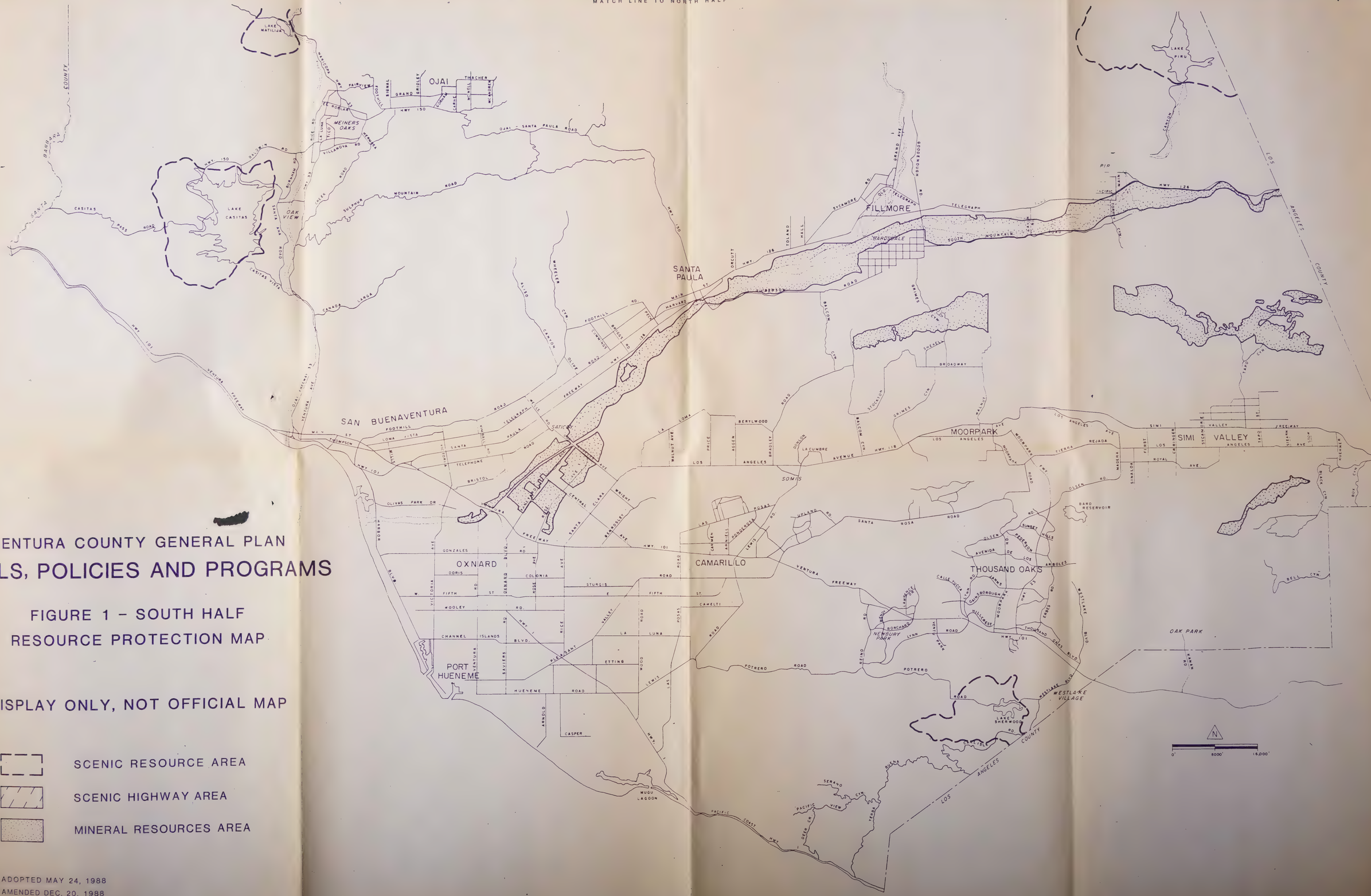
DISPLAY ONLY, NOT OFFICIAL MAP

SCENIC RESOURCE AREA

SCENIC HIGHWAY AREA

MINERAL RESOURCES AREA

ADOPTED MAY 24, 1988
AMENDED DEC. 20, 1988



VENTURA COUNTY GENERAL PLAN

GOALS, POLICIES AND PROGRAMS

FIGURE 1 – NORTH HALF
RESOURCE PROTECTION MAP

DISPLAY ONLY, NOT OFFICIAL MAP

SCENIC RESOURCE AREA

SCENIC HIGHWAY AREA

MINERAL RESOURCES AREA

ADOPTED MAY 24,1988

0 8000'
4000'

BALLINGER CANYON

GUATAL CANYON ROAD

CERRO NOROESTE WINTER SPORTS AREA

KERN COUNTY

MOUNT PINOS ELEV. 8831

CASTAIC LAKE

STATE ROUTE 138

FRAZIER MOUNTAIN ELEV. 8015

LOS ANGELES COUNTY

MARICOPA HWY

LOCKWOOD – OZENA ROAD

SAN GUILLERMO MOUNTAIN ELEV. 8602

BEAR MOUNTAIN ELEV. 4777

INTERSTATE

SANTA BARBARA COUNTY

PEYES PEAK ELEV. 7510

SAN RAFAEL PEAK ELEV. 6666

MC DONALD PEAK ELEV. 6870

THORN POINT ELEV. 6955

COBBLESTONE MOUNTAIN ELEV. 6732

STATE ROUTE 33

TOPA TOPA PEAK ELEV. 6310

SULPHUR PEAK ELEV. 4528

LAKE MATILIJA

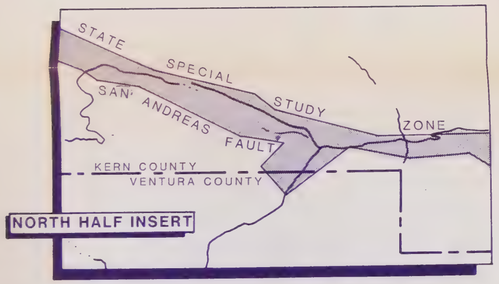
MINES PEAK ELEV. 6704

NORDHOFF PEAK ELEV. 4485

LAKE PIRU

MATCH LINE TO SOUTH HALF

MATCH LINE TO NORTH HALF



VENTURA COUNTY GENERAL PLAN

GOALS, POLICIES AND PROGRAMS

FIGURE 2 – SOUTH HALF
HAZARDS PROTECTION MAP

DISPLAY ONLY, NOT OFFICIAL MAP

AREAS SUBJECT TO FLOOD PLAIN MANAGEMENT ORDINANCE

AREAS CONTAINING ALQUIST-PRIOLO SPECIAL STUDY ZONES

ADOPTED MAY 24, 1988

VENTURA COUNTY GENERAL PLAN

GOALS, POLICIES AND PROGRAMS

FIGURE 2 – NORTH HALF

HAZARDS PROTECTION MAP

DISPLAY ONLY, NOT OFFICIAL MAP

AREAS SUBJECT TO FLOOD PLAIN MANAGEMENT ORDINANCE

AREAS CONTAINING ALQUIST – PRIOLO SPECIAL STUDY ZONES

ADOPTED MAY 24, 1988

0' 8000'
4000'

ALQUIST – PRIOLO SPECIAL STUDY ZONE

SAN ANDREAS FAULT

QUATAL CANYON ROAD

KERN COUNTY

CEDRO NORDESTE WINTER SPORTS AREA

MOUNT PINOS ELEV. 8831

CASTAIC LAKE

STATE ROUTE 138

FRAZIER MOUNTAIN ELEV. 8013

LOS ANGELES COUNTY

INTERSTATE

BEAR MOUNTAIN ELEV. 4777

MARICOPA HWY.

LOCKWOOD – OZENA ROAD

SAN GUILLERMO MOUNTAIN ELEV. 6602

SANTA BARBARA COUNTY

REYES PEAK ELEV. 7510

SAN RAFAEL PEAK ELEV. 6666

MC DONALD PEAK ELEV. 6870

THORN POINT ELEV. 6955

COBBLESTONE MOUNTAIN ELEV. 6730

STATE ROUTE 33

TOPA TOPA PEAK ELEV. 6210

SULPHUR PEAK ELEV. 4528

HINES PEAK ELEV. 6704

NORDHOFF PEAK ELEV. 4483

MATCH LINE TO SOUTH HALF

MATCH LINE TO NORTH HALF

DISPLAY ONLY, NOT OFFICIAL MAP

VENTURA COUNTY GENERAL PLAN

GENERAL LAND USE MAP

GOALS, POLICIES AND PROGRAMS

FIGURE 3.1 SOUTH HALF

- URBAN (PER CITY GENERAL PLAN OR AREA PLAN)
- URBAN RESERVE (OVERLAY) (DASHED LINE REPRESENTS SPHERE OF INFLUENCE BOUNDARY)
- EXISTING COMMUNITY (PER AREA PLAN OR COMMUNITY MAP)
- RURAL (1 ACRE+)
- AGRICULTURAL (40 ACRE+)
- OPEN SPACE (10 ACRE+)
- STATE/FEDERAL FACILITY

1 — 5 Ac. MIN.

MEINERS OAKS
OJAI
SUMMIT
MIRA MONTE
Ventura River Valley
LAKE CASITAS
CASITAS SPRINGS
PHILIPS
RINCON POINT
La Conchita
MOBIL RINCON
MUSSEL SHOALS
SEACLIFF
FARIA
SOLIMAR
VENTURA AVENUE
NORTH VENTURA AVENUE
SAINT PAUL
WEST SANTA PAULA
MISSION ROCK ROAD
SATICOY COUNTRY CLUB
EAST SANTA PAULA
SOUTH MOUNTAIN
FILLMORE
Piru
LAKE PIRU
MOORPARK
NORTH SIMI
STOCKTON ACRES
COLLEGE YOUTH AUTHORITY
NYELAND ACRES
OXNARD
PORT HUENEME
HOLLYWOOD BEACH
SILVERSTRAND BEACH
NAVAL CONSTRUCTION BATTALION CENTER
POINT MUGU NAVAL AIR STATION
Saticoy
STACY-TERRA SELVA LANES
CAMARILLO
RANCHO CONEJO
THOUSAND OAKS
OAKS OF CONEJO
KELLY ESTATES
CAMARILLO STATE HOSPITAL
VENTU PARK
Lake Sherwood
ROLLING OAKS
Solromar
SANTA SUSANA
BOX CANYON
BELL CANYON
Oak Park

ADOPTED MAY 24,1988

REVISED DEC. 11, 1990

N

0" 8000" 16,000"

DISPLAY ONLY, NOT OFFICIAL MAP

VENTURA COUNTY GENERAL PLAN

GENERAL LAND USE MAP

GOALS, POLICIES AND PROGRAMS

FIGURE 3.1 NORTH HALF

- URBAN (PER CITY GENERAL PLAN OR AREA PLAN)
- URBAN RESERVE (OVERLAY) (DASHED LINE REPRESENTS SPHERE OF INFLUENCE BOUNDARY)
- EXISTING COMMUNITY (PER AREA PLAN OR COMMUNITY MAP)
- RURAL (1 ACRE+)
- AGRICULTURE (40 ACRE+)
- OPEN SPACE (10 ACRE+)
- STATE/FEDERAL FACILITY

1 — 5 Ac. MIN.

PRIVATELY OWNED/OPEN SPACE (10 Ac +)

SOURCE: VENTURA COUNTY PLANNING DIVISION

0 8000
4000

ADOPTED MAY 24,1988
AMENDED DEC. 20, 1988

QUATAL CANYON ROAD

MARICOPA HWY

CAMP SCHEIDECK

SANTA BARBARA COUNTY

STATE ROUTE 33

KERN COUNTY

LOCKWOOD — OZENA ROAD

MOUNT PINOS ELEV 8831

FRAZIER MOUNTAIN ELEV 8013

REACH MOUNTAIN ELEV 4777

LOS ANGELES COUNTY

MC DONALD PEAK ELEV 6870

SAN RAFAEL PEAK ELEV 4868

COBBLESTONE MOUNTAIN ELEV 6730

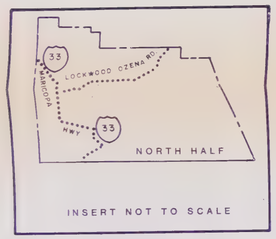
THORN POINT ELEV 6955

TOPA TOPA PEAK ELEV 6210

SULPHUR PEAK ELEV 4328

HINES PEAK ELEV 6104

MATCH LINE TO SOUTH HALF



INSERT NOT TO SCALE

WASTE FACILITIES

- SEWAGE TREATMENT FACILITIES
- SOLID WASTE DISPOSAL SITES

2010 REGIONAL ROAD NETWORK

FREEWAYS/EXPRESSWAYS	HIGHWAYS/THOROUGHFARES
INTERCHANGES	2 LANES
4 LANES	4 LANES
6 LANES	6 LANES
8 LANES	8 LANES
10 OR MORE LANES	RESERVED R.O.W.
RESERVED R.O.W.	CITY/THOROUGHFARE
STATE ROUTE	CITY
U.S. ROUTE	CITY SPHERE OF influence

ADOPTED MAY 24,1988

REVISED DEC. 11, 1990 (GPA 90-4)

VENTURA COUNTY GENERAL PLAN

GOALS, POLICIES AND PROGRAMS–FIGURE 4

PUBLIC FACILITIES MAP

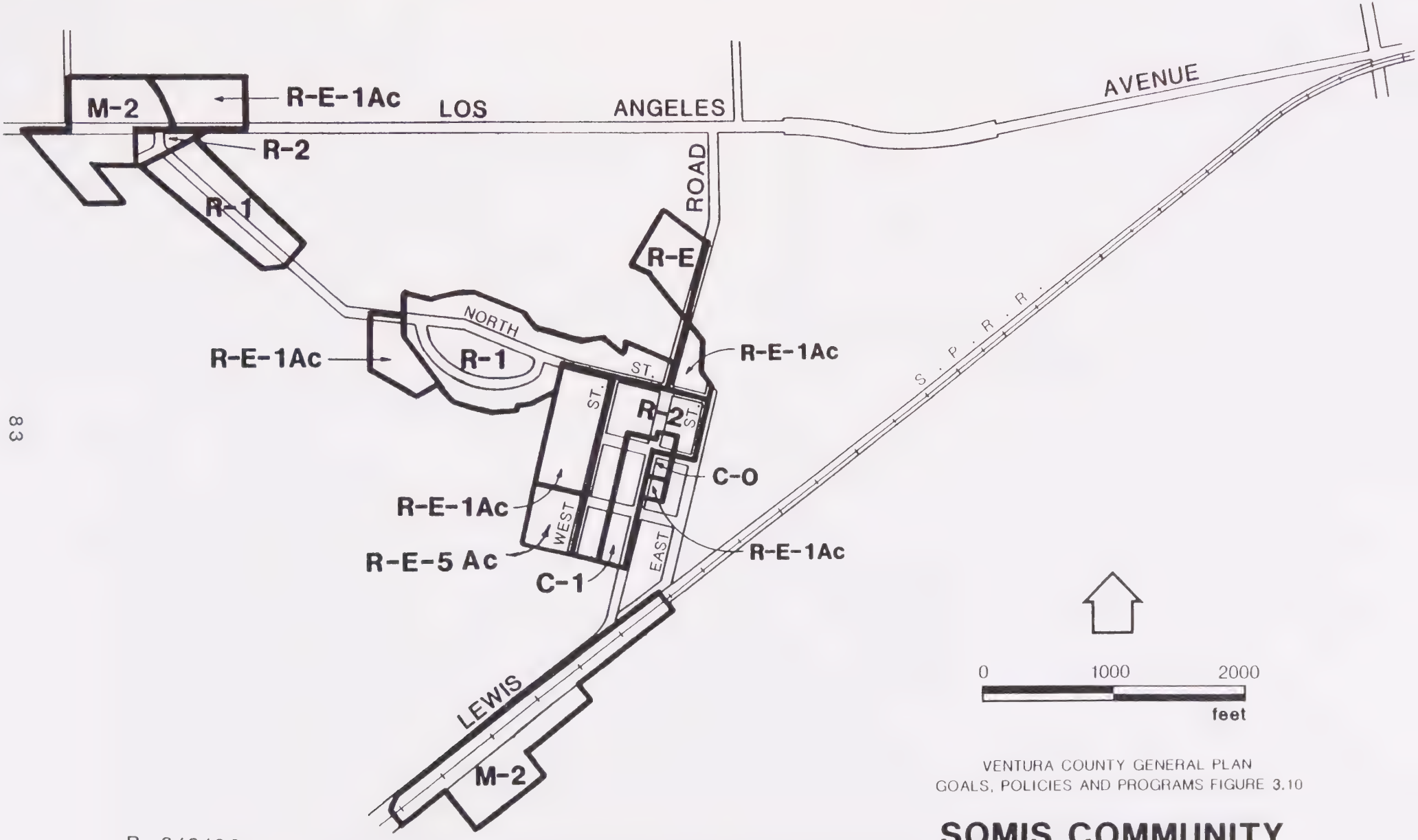
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PROGRA

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VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.10

SOMIS COMMUNITY

EXISTING COMMUNITY

R. 3/2/93

FIGURE 3.10
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

SOMIS COMMUNITY

RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-5Ac	5.0	25%	0.20	1	3.24	3	0.57
R-E-1Ac	15.0	25%	1.00	15	3.24	49	3.27
R-E	4.0	36%	4.36	17	3.24	55	13.75
R-1	25.0	45%	7.26	181	3.24	586	23.44
R-2	5.0	50%	12.45	62	3.24	200	40.00
	54.0			276		892	

COMMERCIAL/INDUSTRIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Projected Floor Area (x1000 SF)	Average Employees 1000 SF	Employees	Average Employees/ Acres
C-O	4.1	50%	62.5	4.0	250	61.0
C-1	2.2	60%	14.4	2.0	29	13.2
M-2	35.7	50%	311.0	2.0	622	17.4
	42.0		387.9		901	

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Las Posas Nongrowth Area.
***Excludes greenhouses, hothouses and the like.

County Planning Division

Ventura County General Plan
Goals, Policies, and Programs

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VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.11

SATICOY COUNTRY CLUB

EXISTING COMMUNITY

FIGURE 3.11
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

SATICOY COUNTRY CLUB COMMUNITY

RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-20	19.0	29%	2.18	41	3.24	133	7.00

COMMERCIAL/INDUSTRIAL

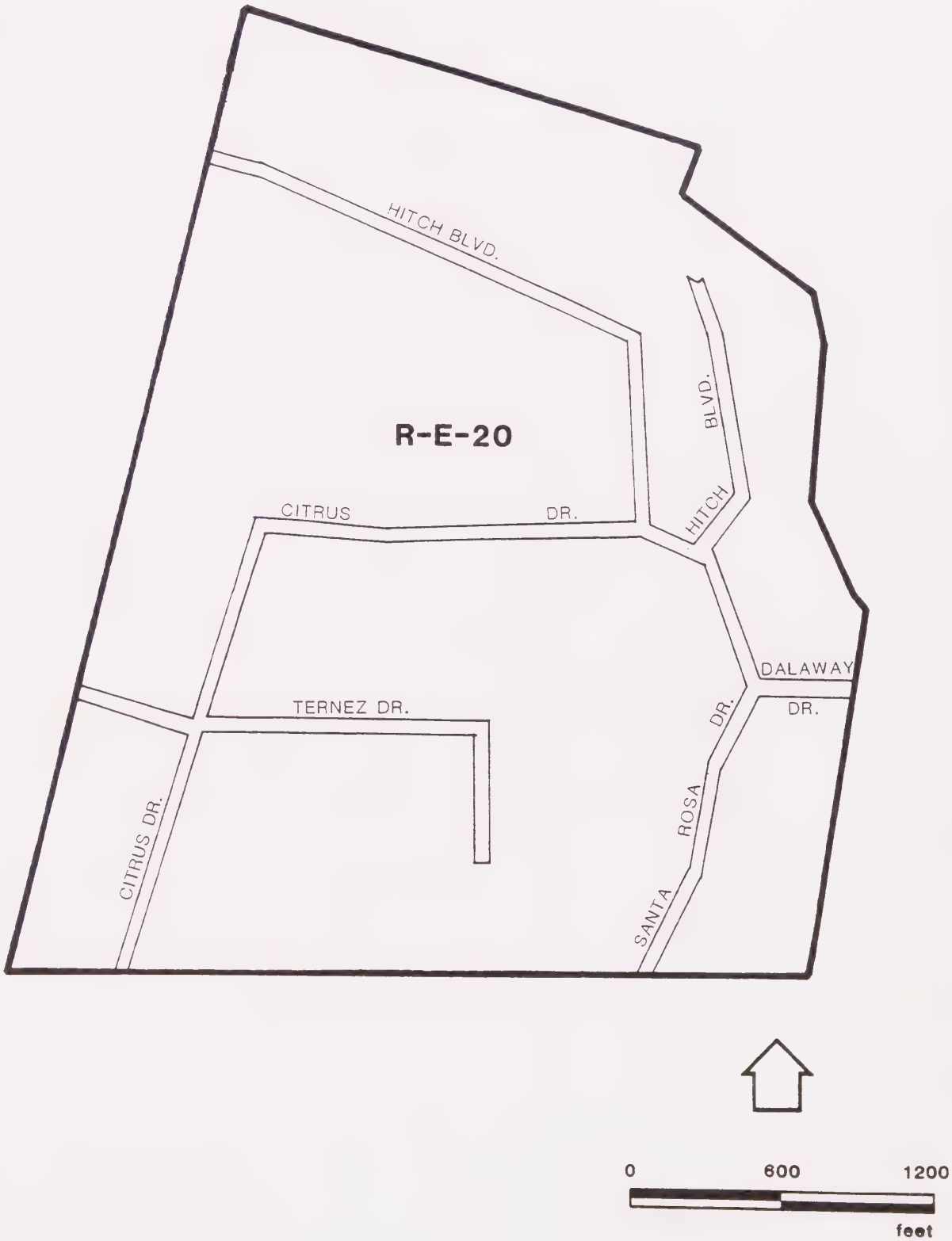
Designation	Net Acres	Max. Bldg Coverage (% of Lot Area)	Projected Floor Area (x1000 SF)	Average Employees/ 1000 SF	Employees	Average Employee/ Acre
C-P-D	8.2	60%	53.6	2.0	107	13.1

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Las Posas Nongrowth Area

County Planning Division

Ventura County General Plan
Goals, Policies, and Programs

R.7/12/94



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.12

HOME ACRES

EXISTING COMMUNITY

FIGURE 3.12
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

HOME ACRES COMMUNITY

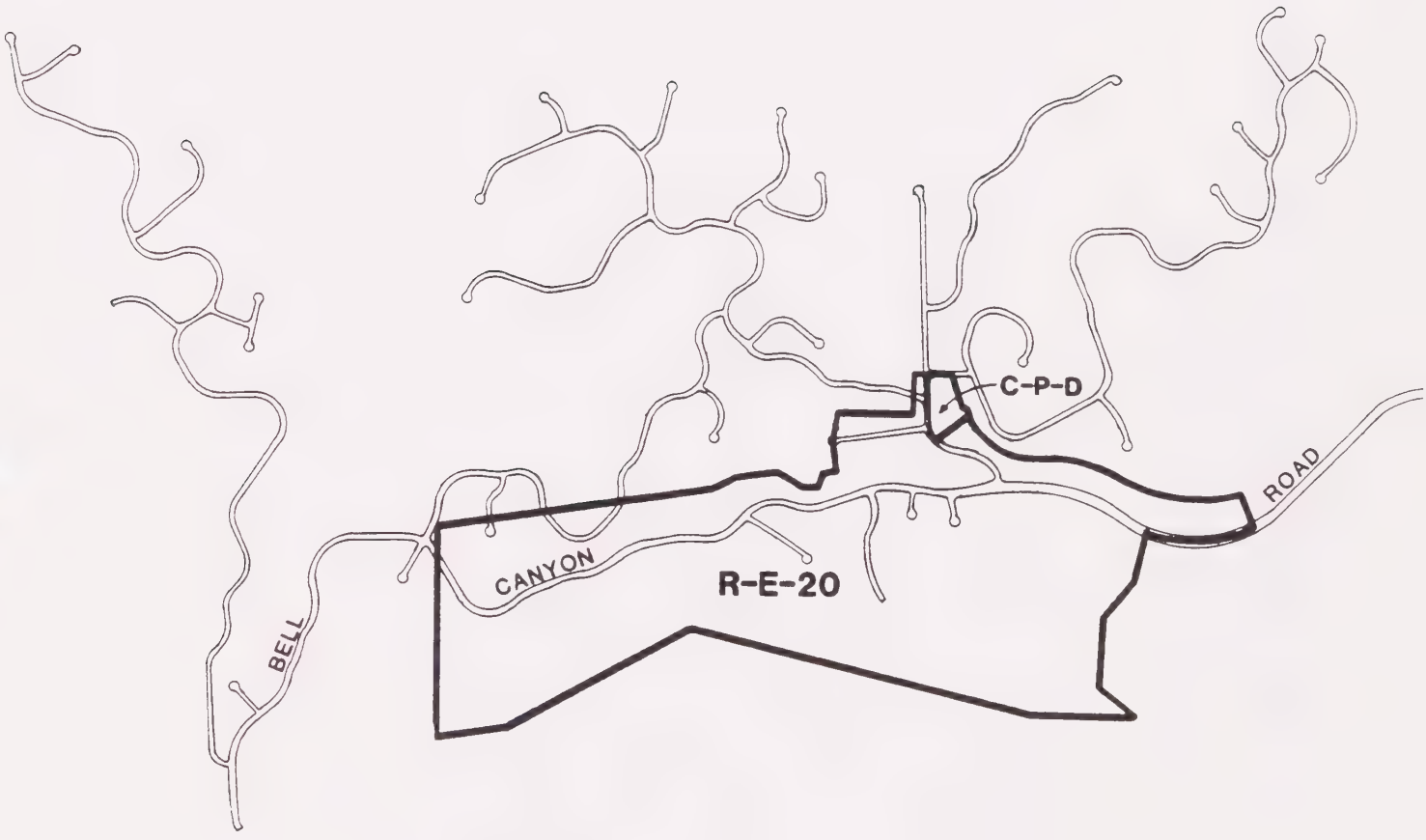
RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-20	161.0	29%	2.18	350	2.91	1,019	6.33

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Moorpark Growth Area

County Planning Division
March 1988

Ventura County General Plan
Goals, Policies, and Programs



0 1200 2400

Rev. 12-1-92

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.13

BELL CANYON

EXISTING COMMUNITY

FIGURE 3.13
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

BELL CANYON COMMUNITY

RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-20	208.8	29%	2.18	455	2.69	1,223	5.85

COMMERCIAL/INDUSTRIAL

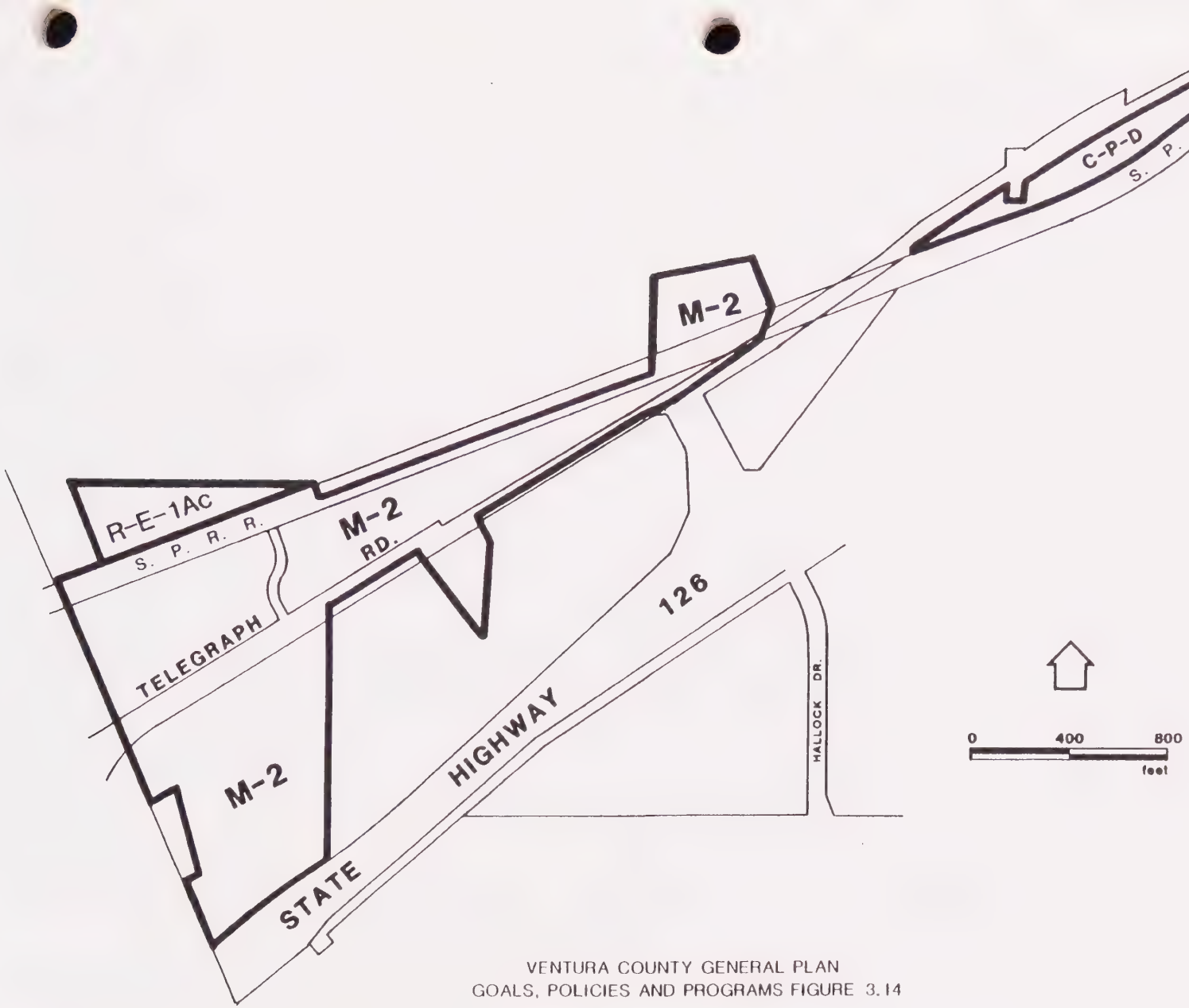
Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Projected Floor Area (x1000 SF)	Average Employees/ 1000 SF	Employees	Average Employees/ Acre
C-P-D	2.5	60%	16.3	2.0	32	12.8

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Oak Park Nongrowth Area

County Planning Division

Ventura County General Plan
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R. 12/1/92



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.14

EAST SANTA PAULA

EXISTING COMMUNITY

FIGURE 3.14
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

EAST SANTA PAULA COMMUNITY

RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-1Ac	7.0	25%	1.00	7	2.65	19	2.71

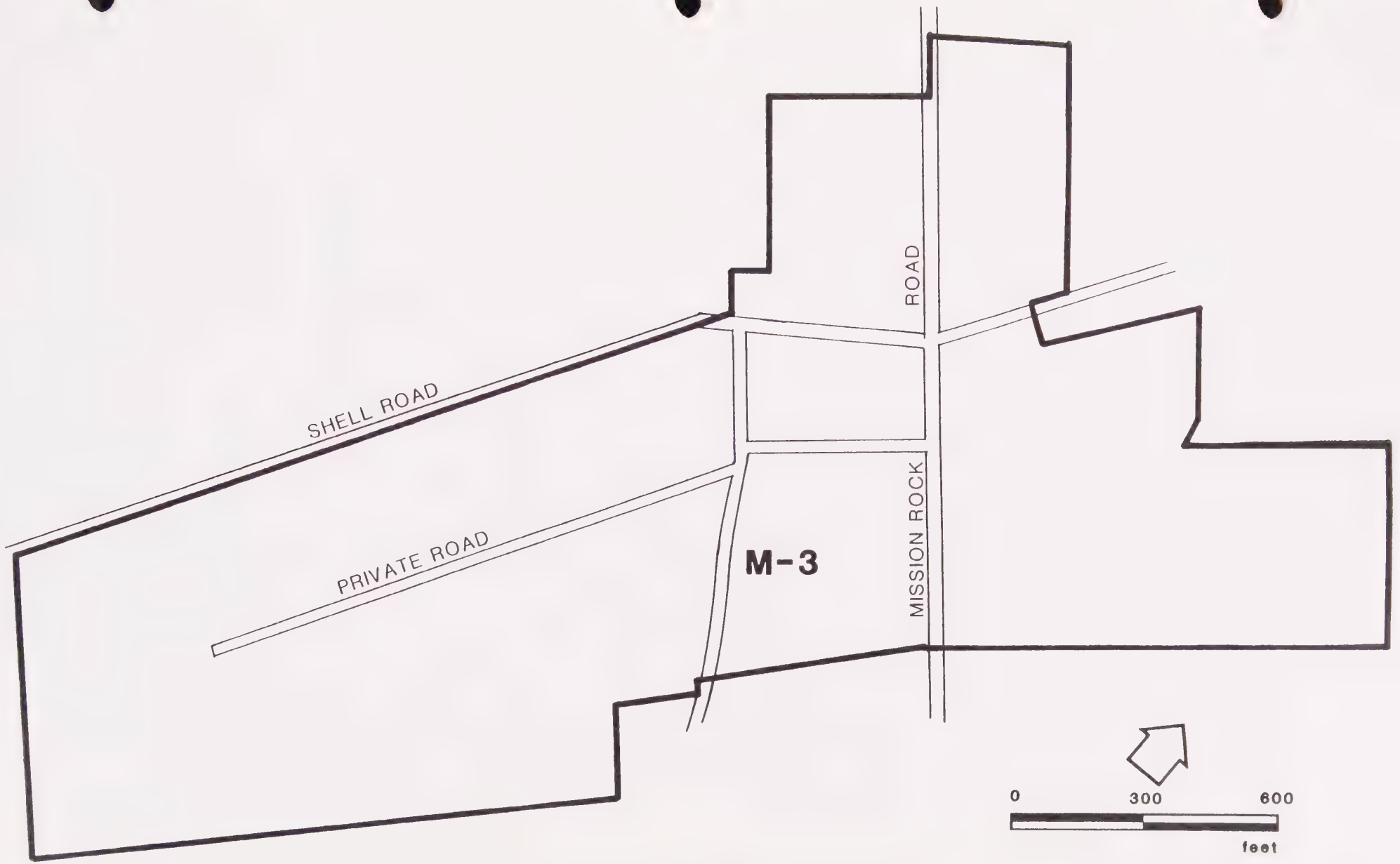
COMMERCIAL/INDUSTRIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Projected Floor Area (x1000 SF)	Average Employees/ 1000 Sf	Employees	Average Employees/ Acre
C-P-D	3.0	60%	19.6	2.0	39	13.0
M-2	36.7	50%	319.7	2.0	639	17.4
	39.7		339.3		678	

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Santa Paula Growth Area

County Planning Division
March 1988

Ventura County General Plan
Goals, Policies, and Programs



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.15

MISSION ROCK ROAD

EXISTING COMMUNITY

FIGURE 3.15
BUILDING INTENSITY/EMPLOYMENT DENSITY STANDARDS

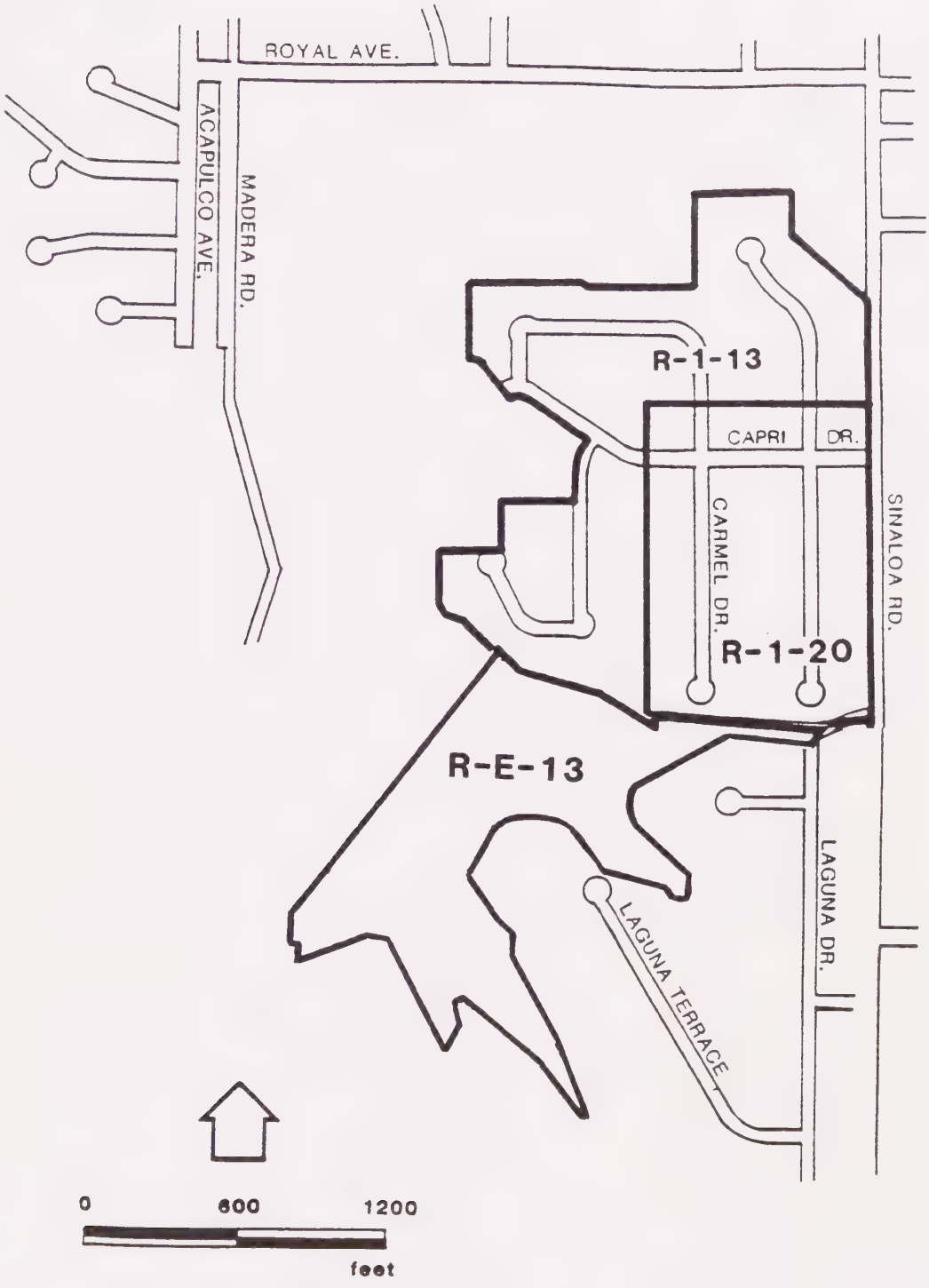
MISSION ROCK ROAD COMMUNITY

COMMERCIAL/INDUSTRIAL

Designation	Acres	Max. Bldg. Coverage (% of Lot Area)	Projected Floor Area (x1000 SF)	Average Employees/ 1000 SF	Employees	Average Employees/ Acre
M-3	91.1	40%	258	2.0	516	5.66

County Planning Division
March 1988

Ventura County General Plan
Goals, Policies, and Programs



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.16

WEST SIMI

EXISTING COMMUNITY

FIGURE 3.16
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

WEST SIMI COMMUNITY

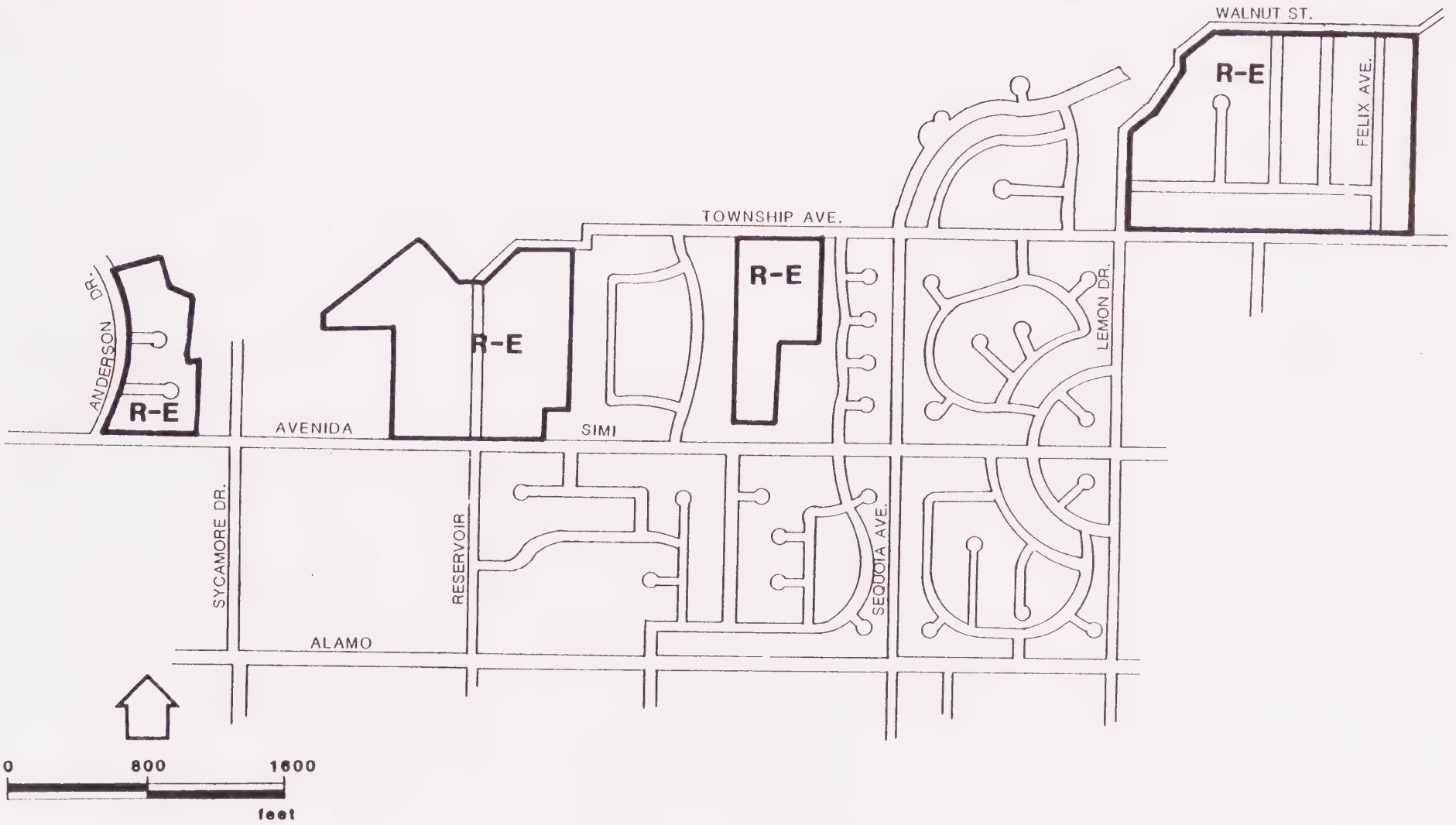
RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-1-13	25.0	33%	3.35	83	3.03	251	10.04
R-1-20	19.0	29%	2.18	41	3.03	124	6.53
R-E-13	22.4	33%	3.35	75	3.03	227	10.13
	66.4			199		602	

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Simi Valley Growth Area

County Planning Division
March 1988

Ventura County General Plan
Goals, Policies, and Programs



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.17

NORTH SIMI

EXISTING COMMUNITY

FIGURE 3.17
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

NORTH SIMI COMMUNITY

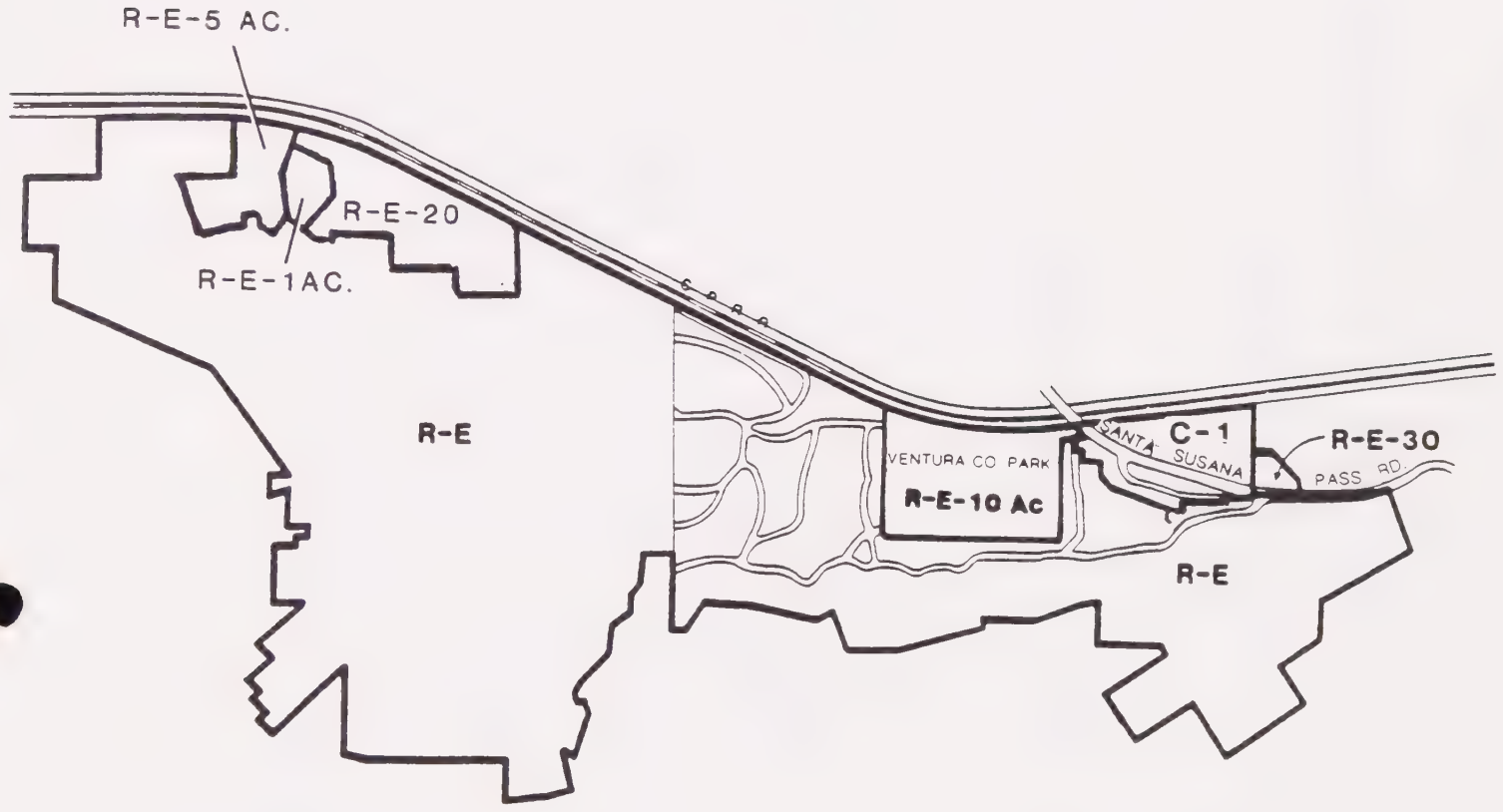
RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre
R-E	55.0	36%	4.36	239	3.03	724	13.16

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Simi Valley Growth Area

County Planning Division
March 1988

Ventura County General Plan
Goals, Policies, and Programs



Revised Dec. 1991

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.18

SANTA SUSANA

EXISTING COMMUNITY

FIGURE 3.18
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

SANTA SUSANA COMMUNITY

RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-10Ac	16.1	5%	0.10***	1	3.03	3	0.19
R-E-5Ac	5.3	25%	0.20	1	3.03	3	0.57
R-E-1Ac	3.7	25%	1.00	3	3.03	9	2.43
R-E-30	1.4	26%	1.45	2	3.03	6	4.29
R-E-20	14.6	29%	2.18	14	3.03	42	2.88
R-E	1.8	36%	4.36	784	3.03	2,375	13.19
	221.1			802		2,438	

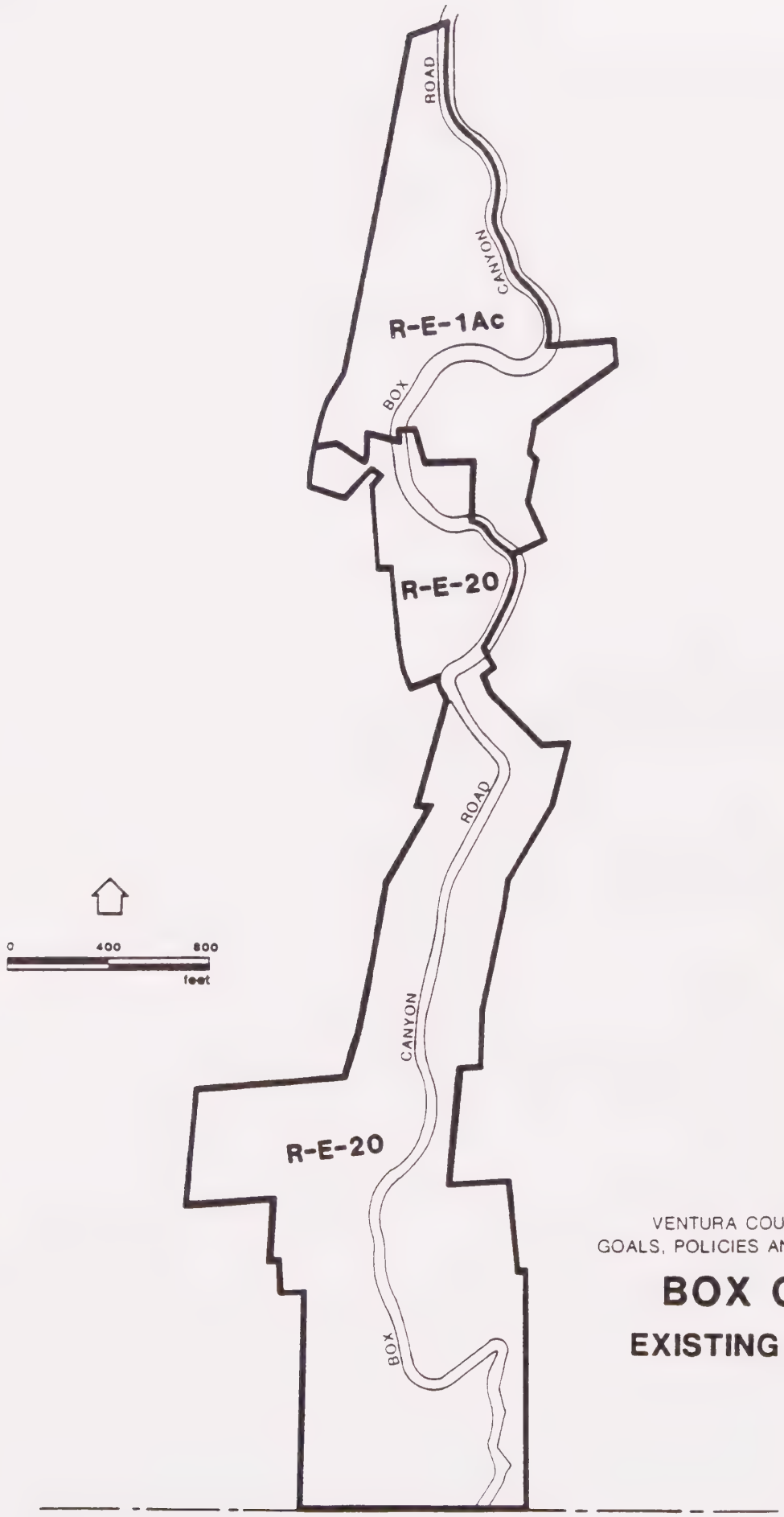
COMMERCIAL/INDUSTRIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Projected Floor Area (x1000 SF)	Average Employees/ 1000 Sf	Employees	Average Employees/ Acre
C-1	8.2	60%	53.3	2.0	106	12.9

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Simi Valley Growth Area
***Excludes greenhouses, hothouses and the like.

Ventura County General Plan
Goals, Policies, and Programs

R. 12/10/91



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.19

BOX CANYON

EXISTING COMMUNITY

FIGURE 3.19
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

BOX CANYON COMMUNITY

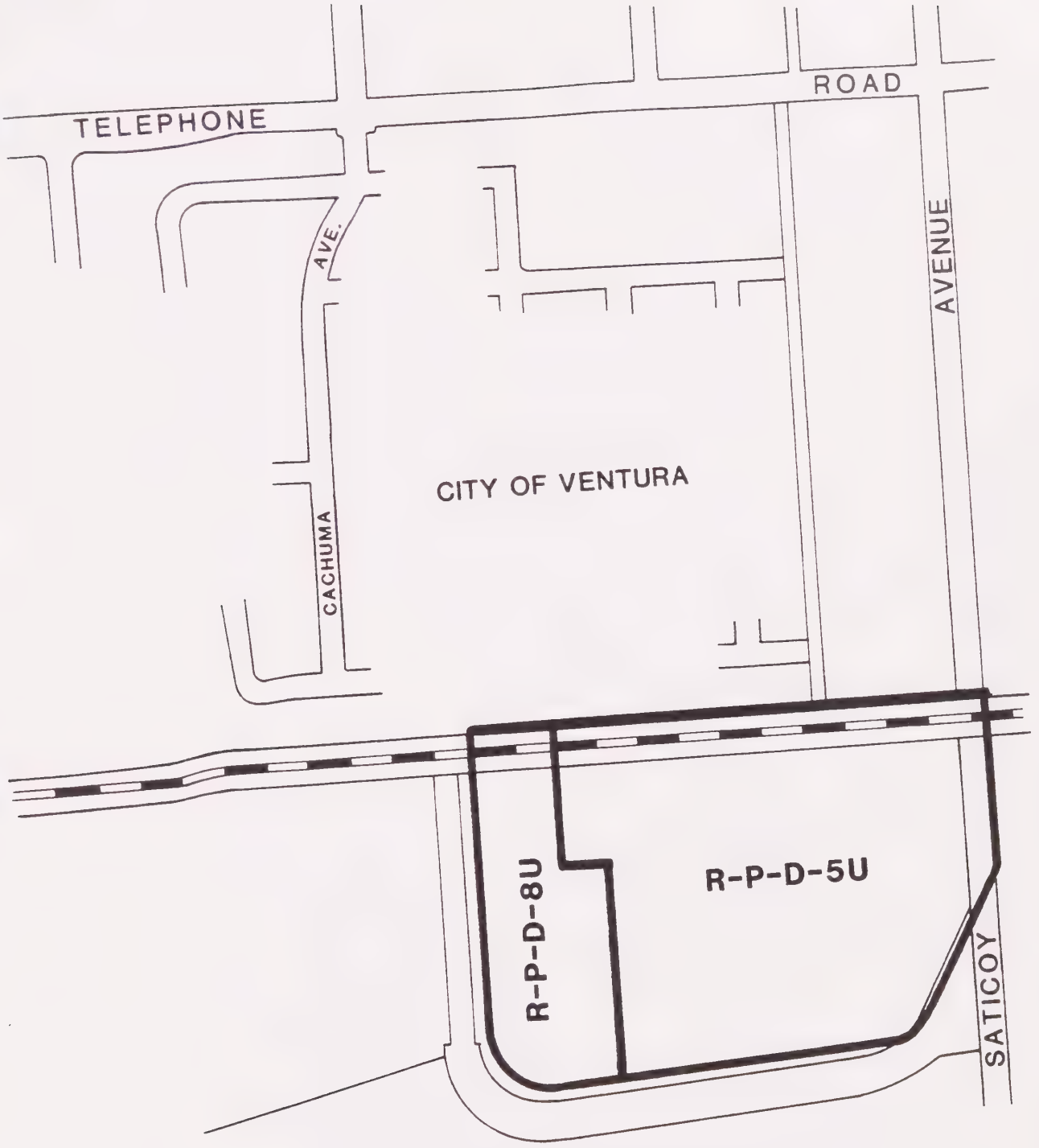
RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-E-1Ac	12.0	25%	1.00	12	2.31	28	2.33
R-E-20	56.0	29%	2.18	122	2.31	282	5.04
	68.0			134		310	

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Simi Valley Nongrowth Area

County Planning Division
March 1988

Ventura County General Plan
Goals, Policies, and Programs



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.20

CABRILLO VILLAGE

EXISTING COMMUNITY

FIGURE 3.20
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

CABRILLO VILLAGE COMMUNITY

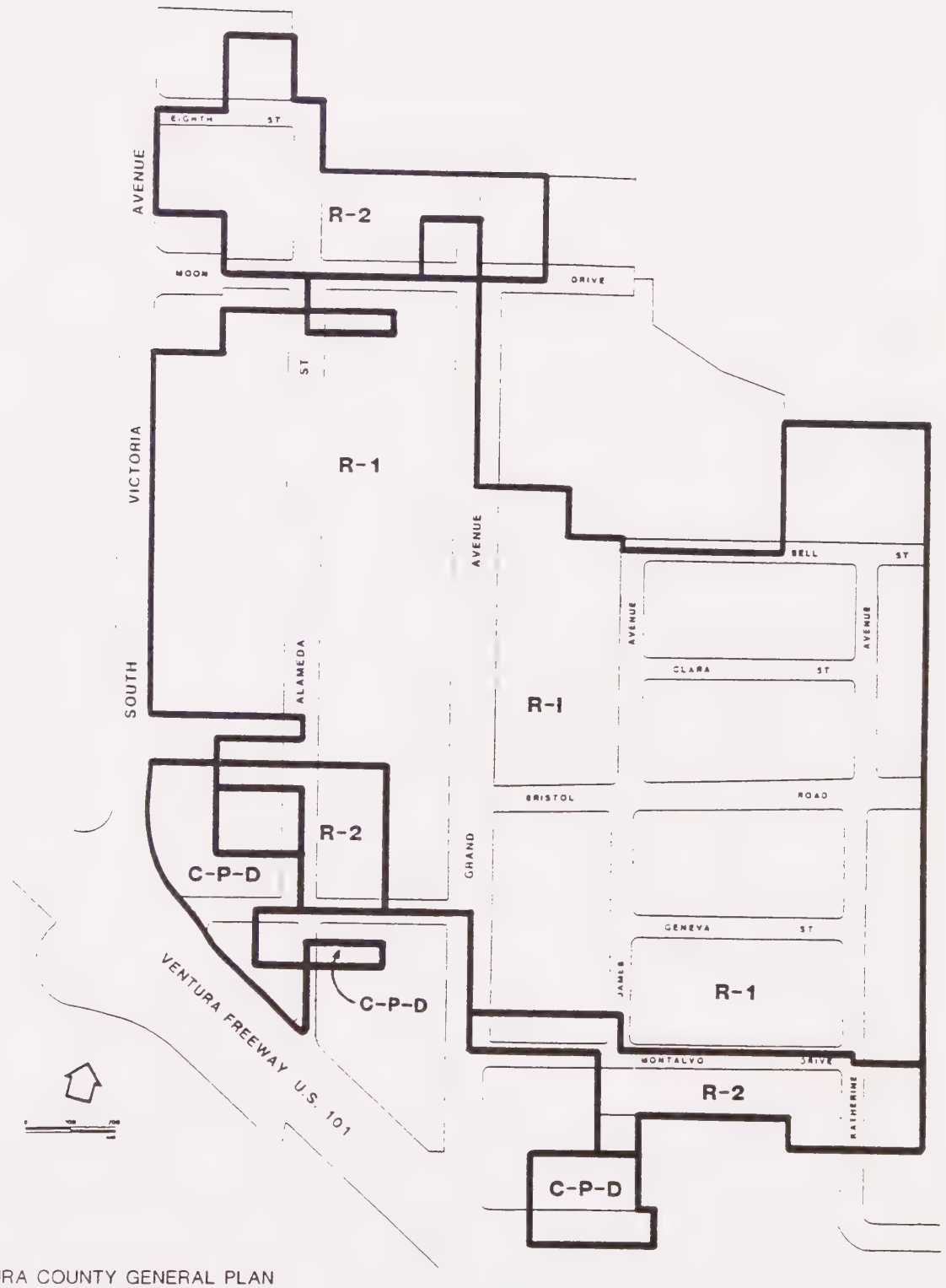
RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-P-D-5U	15.0	38%	5.00	75	2.34	176	11.73
R-P-D-8U	5.0	48%	8.00	40	2.34	94	18.80
	20.0			115		270	

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Ventura Growth Area

County Planning Division
March 1988

Ventura County General Plan
Goals, Policies, and Programs



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS FIGURE 3.21

MONTALVO

EXISTING COMMUNITY

FIGURE 3.21
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

MONTALVO COMMUNITY

RESIDENTIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Maximum Intensity (DU/Ac)*	DU's	Average Pop/DU**	Population	Average Pop. Density (Pop/Acre)
R-1	30.0	45%	7.26	217	2.34	508	16.93
R-2	16.0	50%	12.45	199	2.34	466	29.13
	46.0			416		974	

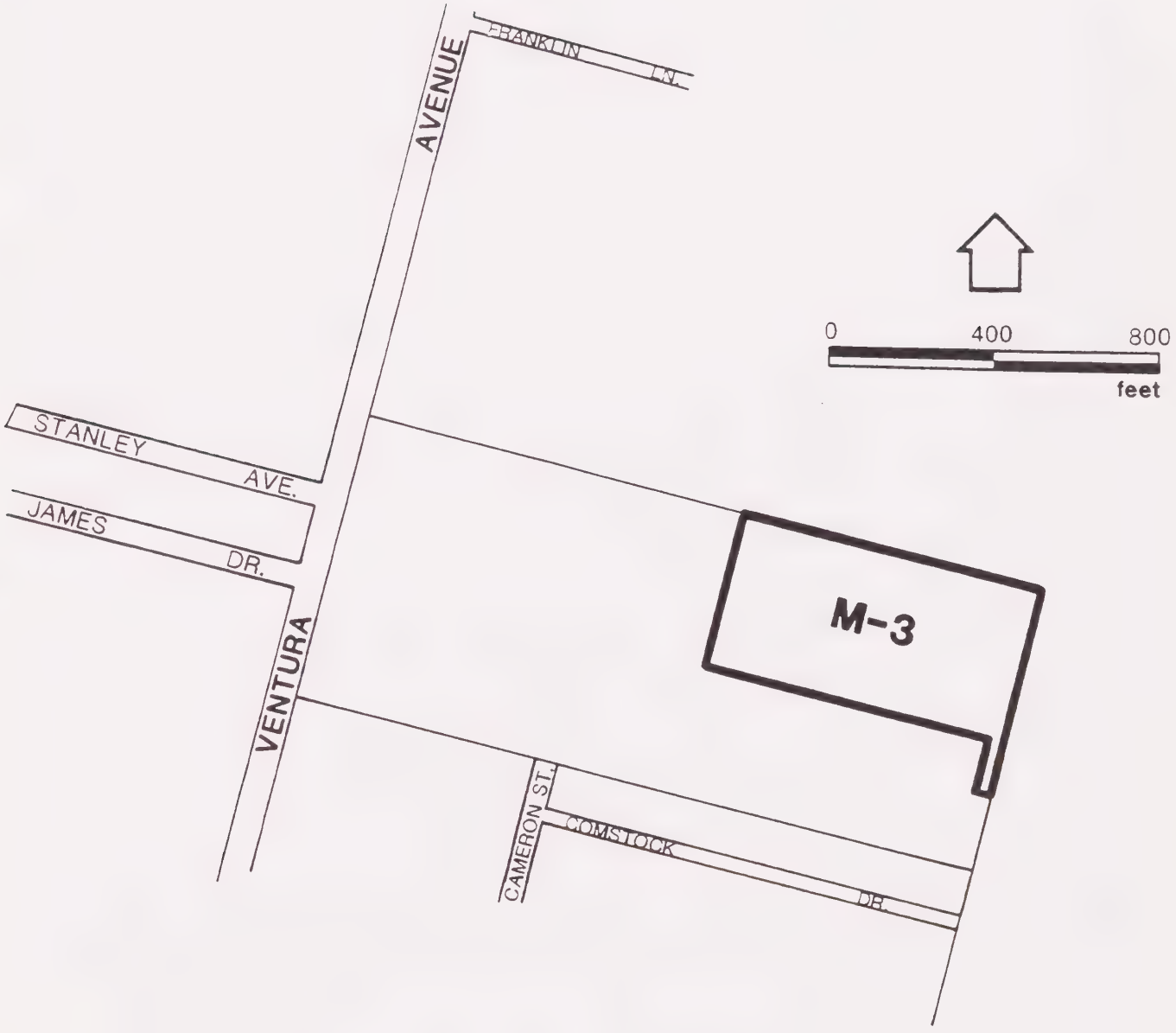
COMMERCIAL/INDUSTRIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Projected Floor Area (x1000 SF)	Average Employees/ 1000 Sf	Employees	Average Employees/ Acre
C-P-D	2.9	60%	19	2.0	38	13.1

*Excludes second dwelling units per Section 65852.2 of the State Government Code.
**Year 2000 Forecast for Ventura Growth Area

County Planning Division
March 1988

Ventura County General Plan
Goals, Policies, and Programs



VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS-FIGURE 3.22

VENTURA AVENUE

EXISTING COMMUNITY

Revised: Sept. 1989

Figure 3.22
BUILDING INTENSITY/POPULATION DENSITY STANDARDS

VENTURA AVENUE COMMUNITY

COMMERCIAL/INDUSTRIAL

Designation	Net Acres	Max. Bldg. Coverage (% of Lot Area)	Projected Floor Area (x1000 SF)	Average Employees/ 1000 Sf	Employees	Average Employees/ Acre
M-3	6.5	40%	57	2.0	113	17.38

Ventura County General Plan
Goals, Policies, and Programs

R. 12/19/89

FIGURE 3.23

COUNTYWIDE 1980 - 2010 POPULATION FORECAST

AREA	CENSUS 4/1/80	1985	1990	1995	2000	2005	2010
RSA 1	487	540	570	620	650	690	730
North Half NGA	487	540	570	620	650	690	730
RSA 2	133,105	143,290	149,310	160,410	171,470	179,560	187,890
Santa Paula GA	20,889	22,320	24,500	26,000	27,500	29,000	30,500
Santa Paula NGA	2,958	3,030	3,050	3,050	3,050	3,050	3,050
Ojai GA	8,411	9,070	9,460	9,550	9,630	9,700	9,760
Ojai NGA	2,298	2,540	2,540	2,620	2,700	2,780	2,860
Ventura GA	83,209	90,100	93,000	102,000	111,000	116,940	123,150
Ventura NGA	982	1,120	1,150	1,200	1,250	1,300	1,360
Ventura River GA	12,849	13,500	14,000	14,360	14,680	15,100	15,500
Ventura River NGA	1,509	1,610	1,610	1,630	1,660	1,690	1,710
RSA 3	195,250	211,100	239,530	262,910	291,930	316,740	343,100
Camarillo GA	45,711	52,690	61,560	68,150	74,300	79,340	84,280
Camarillo NGA	3,069	3,680	5,050	5,610	6,140	6,640	7,100
Las Posas NGA	1,920	2,030	2,130	2,240	2,340	2,440	2,520
Oxnard GA	121,046	127,700	144,000	159,000	180,000	198,000	217,800
Oxnard NGA	4,997	5,000	5,120	5,100	5,100	5,090	5,070
Port Hueneme GA	18,507	20,000	21,670	22,810	24,050	25,230	26,330
RSA 4	90,105	106,990	128,590	144,850	159,760	174,000	187,340
Moorpark GA	8,054	14,260	23,020	29,590	35,740	41,690	47,080
Moorpark NGA	670	690	750	780	810	830	860
Simi Valley GA	80,294	90,640	103,220	112,650	121,170	129,220	136,930
Simi Valley NGA	1,087	1,400	1,600	1,830	2,040	2,260	2,470
RSA 5	96,877	108,300	124,630	137,350	145,040	150,740	153,550
Oak Park GA	3,617	4,880	13,130	17,350	16,740	16,230	15,730
Oak Park NGA	228	300	320	340	350	370	390
Thousand Oaks GA	91,962	101,910	109,900	118,300	126,500	132,600	135,800
Thousand Oaks NGA	1,070	1,210	1,280	1,360	1,450	1,540	1,630
RSA 6	13,350	14,140	16,520	17,780	18,920	20,050	21,160
Fillmore GA	9,604	10,300	12,230	13,310	14,260	15,220	16,170
Fillmore NGA	2,182	2,240	2,240	2,230	2,230	2,230	2,240
Piru GA	1,368	1,400	1,810	1,980	2,150	2,300	2,440
Piru NGA	196	200	240	260	280	300	310
County Total	529,174	584,360	659,150	723,920	787,770	841,780	893,770

County Board of Supervisors
May 1985

Ventura County General Plan
Goals, Policies, and Program

RSA = Regional Statistical Area
GA = Growth Area
NGA = Non-Growth Area

FIGURE 3.24

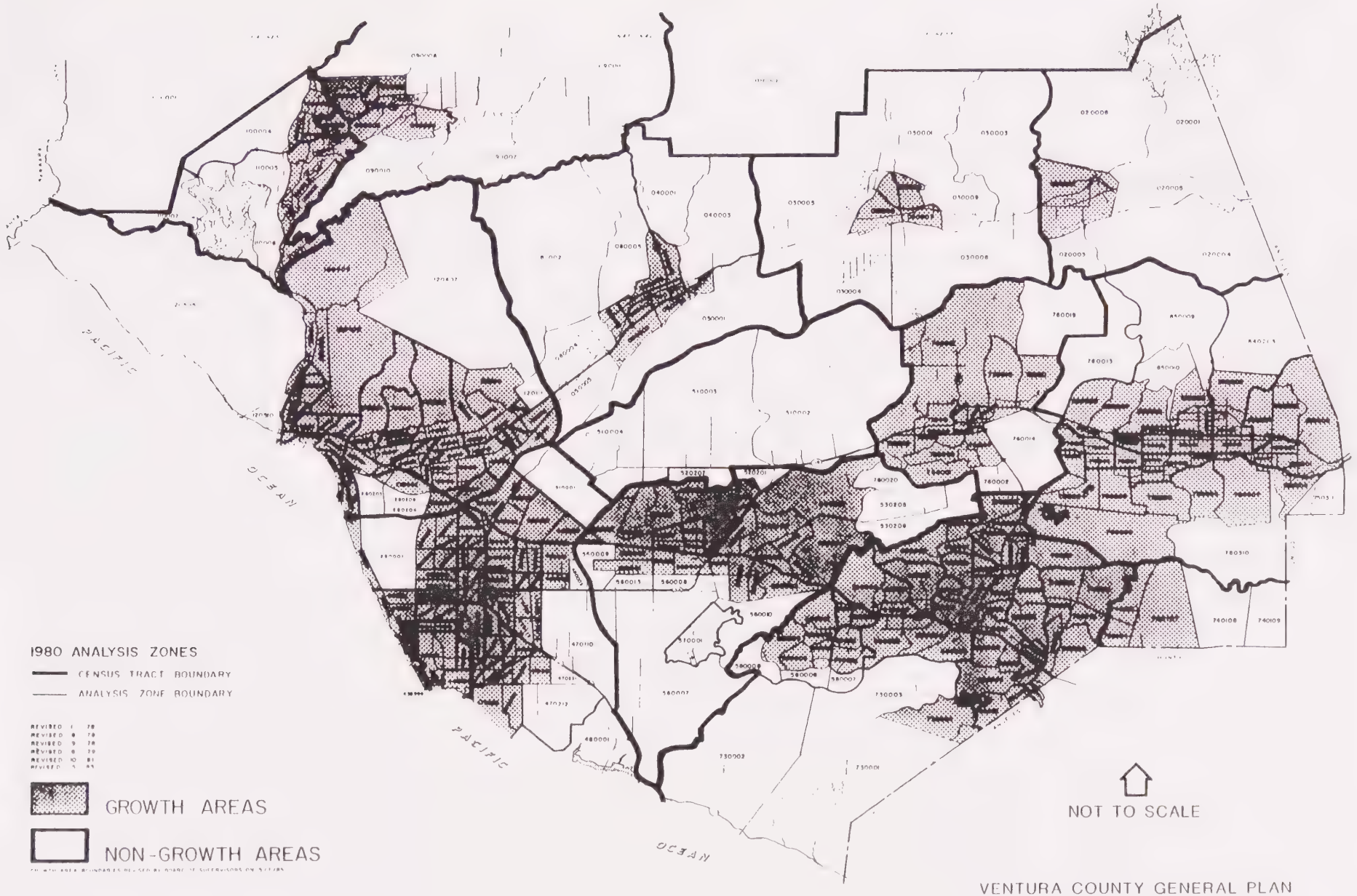
COUNTYWIDE 1980-2010 DWELLING UNIT FORECAST

AREA	CENSUS 4/1/80	1985	1990	1995	2000	2005	2010
RSA 1	323	340	360	380	399	418	437
North Half NGA	323	340	360	380	399	418	437
RSA 2	52,199	55,491	59,668	65,431	71,357	76,097	80,921
Santa Paula GA	7,233	7,645	8,750	9,559	10,377	11,197	12,103
Santa Paula NGA	865	882	934	968	1,002	1,036	1,071
Ojai GA	3,316	3,502	3,797	3,912	4,027	4,127	4,227
Ojai NGA	855	929	966	1,023	1,076	1,135	1,187
Ventura GA	33,811	36,184	38,430	42,857	47,436	50,842	54,249
Ventura NGA	627	674	698	721	744	767	791
Ventura River GA	4,916	5,074	5,467	5,742	6,017	6,292	6,568
Ventura River NGA	576	601	626	649	678	701	725
RSA 3	66,247	71,365	83,939	95,141	108,565	120,255	132,528
Camarillo GA	16,804	19,089	23,144	26,314	29,484	31,484	33,484
Camarillo NGA	819	960	1,508	1,741	1,973	2,206	2,438
Las Posas NGA	580	643	608	666	723	781	838
Oxnard GA	39,815	42,029	48,980	55,986	65,217	73,881	83,130
Oxnard NGA	1,287	1,293	1,398	1,454	1,509	1,565	1,620
Port Hueneme GA	6,942	7,351	8,301	8,980	9,659	10,338	11,018
RSA 4	26,724	31,616	40,109	46,801	53,492	60,184	66,877
Moorpark GA	2,476	4,361	7,379	9,830	12,281	14,732	17,184
Moorpark NGA	267	269	304	322	340	358	377
Simi Valley GA	23,534	26,425	31,761	35,875	39,988	44,102	48,215
Simi Valley NGA	447	561	665	774	883	992	1,101
RSA 5	33,663	37,216	44,303	50,117	54,424	57,981	60,539
Oak Park GA	1,078	1,447	4,091	5,598	5,598	5,598	5,598
Oak Park NGA	76	95	110	120	130	140	150
Thousand Oaks GA	31,902	35,019	39,400	43,650	47,900	51,400	53,900
Thousand Oaks NGA	607	655	702	749	796	843	891
RSA 6	4,228	4,321	5,433	6,035	6,637	7,240	7,841
Fillmore GA	3,055	3,129	4,048	4,544	5,040	5,536	6,032
Fillmore NGA	729	740	775	797	820	843	866
Piru GA	380	388	528	603	677	751	825
Piru NGA	64	64	82	91	100	110	118
County Total	183,384	200,342	233,812	263,905	294,874	322,175	349,143

County Board of Supervisors
May 1985

Ventura County General Plan
Goals, Policies and Programs

RSA = Regional Statistical Area
GA = Growth Area
NGA = Non-Growth Area



VENTURA COUNTY GENERAL PLAN

GOALS, POLICIES AND PROGRAM-FIGURE 3.29

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4. PUBLIC FACILITIES AND SERVICES

The Public Facilities and Services Chapter of the General Plan identifies **goals**, **policies** and **programs** applicable to public facilities and services throughout Ventura County at both a local and regional level. The specific goals, policies and programs are listed under the major headings of General Goals, Policies and Programs, Transportation/Circulation, Water Supply, Waste Disposal Facilities, Utilities, Flood Control and Drainage, Law Enforcement and Emergency Services, Fire Protection, Education, Parks and Recreation, and Other Public Buildings and Grounds. In some instances, facilities and services are owned and/or operated by the County of Ventura, or may be provided by an agency governed by the Board of Supervisors. In other cases, facilities and services are owned and operated by independent governmental entities or private companies. The headings listed above are the types of public facilities and services most directly related to the physical development of the County.

Tables, maps, and narrative in the Public Facilities and Services Appendix provide the background information and analysis necessary to establish the goals, policies and programs which are part of the Public Facilities and Services Chapter of the County of Ventura General Plan, with the overall goal of providing necessary public facilities and services to the residents of Ventura County.

The following general goals, policies and programs apply to public facilities and services:

4.1 GENERAL GOALS, POLICIES AND PROGRAMS

4.1.1 *GOALS*

1. Plan for public facilities and services which will adequately serve the existing and future residents of the County.

2. Promote the cost effective operation, equitable distribution, and funding and development of public facilities and services to meet the County's existing and future needs.

3. Ensure that public facilities and services are consistent with the land use and development goals, policies and programs of the County General Plan.

4.1.2 *POLICIES*

1. **Discretionary development** shall be conditioned to contribute land, improvements or funds toward the cost of needed public improvements and services related to the proposed development.

2. **Development** shall only be permitted in those locations where adequate public services are available (functional), under physical construction or will be available in the near future.

3. The location, design and operation of public facilities in the unincorporated area of the County shall be consistent with the Ventura County General Plan.

4. Within a City's Sphere of Influence, annexation to the City is preferable to formation of new or expansion of existing County Service Areas.

5. Within a City's Sphere of Influence, public facility requirements imposed by the County for new or expanding developments, should not be less than those imposed by the City.

6. Within a City's Area of Interest, but outside that City's Sphere of Influence, unincorporated Existing Communities should financially support County-administered urban services which are comparable to those services provided by cities.

4.1.3 *PROGRAMS*

1. All public facility improvements and projects proposed to be located in the unincorporated area of the County shall be included in a comprehensive five year Capital Improvement Program. The Capital Improvement Program shall be updated annually and reviewed by the County Planning Division for conformity to the County General Plan.

2. The Building and Safety Division of the Resource Management Agency will continue the ongoing program to inventory all County owned and County occupied (leased) buildings for compliance with State and Federal Handicapped Assessibility laws, including the Federal, Americans with Disability Act of 1990, as required by HUD per agreement for qualifications for Block Grant Funds.

4.2 TRANSPORTATION/CIRCULATION

The Transportation/Circulation section identifies **goals**, **policies** and **programs** related to: roads and highways, transit, rail service, airports and pipelines.

ROADS AND HIGHWAYS

The **Regional Road Network**, together with the **Local Road Network**, provides the principal means for the movement of persons and goods within Ventura County.

In order to accommodate projected traffic resulting from the implementation of the land use policies of the General Plan, improvements to the **Regional Road Network** and the **Local Road Network** will be necessary. The Regional Road Network anticipated for the year 2010, shown on Public Facilities Map (Figure 4), will function at an acceptable **Level of Service (LOS)** in the unincorporated area of the County if development occurs in accordance with the General Land Use Map (Figure 3.1) at the projected rate of development.

TRANSIT

There are several public transportation systems available in Ventura County. These include: Fillmore Area Transit Company (FATCO), Camarillo Bus Service, Simi Valley Transit System, Thousand Oaks Transit System, South Coast Area Transit (SCAT), Interconnect Bus operated by the County of Ventura, Camarillo, and Thousand Oaks and El Rio/Nyeland Acres bus operated by the County.

Private transit operators include: Greyhound Bus Lines, an intercity bus that travels along Highways 1, 101, 118 and 126, and Great American Stageline, an airport bus company that makes trips to Los Angeles International Airport and occasionally to Burbank.

The Senior Survivalmobile serves senior citizens Countywide during medical emergencies, with the help of volunteers and their cars. In addition, every Ventura County community has a program to transport senior citizens to meal sites and meals to seniors, and other Social Services Agency transit providers fill special travel needs.

Taxicab companies are available in all cities except Fillmore, Moorpark and Ojai.

RAIL SERVICE

Freight rail service is provided by Southern Pacific Transportation Company and the local Ventura County Railway Company, headquartered in Oxnard.

Southern Pacific Transportation Company provides intra-state and trans-continental rail freight service from its main coast line which runs from the Santa Barbara County line along the coast south through Ventura to Oxnard and then east through Camarillo, Moorpark, and Simi Valley to the Los Angeles County line. A branch line travels along the Santa Clara River Valley from Montalvo in a northeasterly direction through Santa Paula and Fillmore.

The Ventura County Railway Company is a local railroad connecting the Southern Pacific tracks with the U.S. Naval Construction Battalion Center and deep seaport in Port Hueneme and industrial parks in Oxnard, south of Fifth Street.

Passenger rail service is available on Amtrak. Amtrak utilizes Southern Pacific's main coast line stopping at Oxnard and Simi Valley stations daily, with one run going north and the other south.

AIRPORTS

There are four airports in Ventura County, which include County owned and operated airports at Camarillo and Oxnard, a private airport at Santa Paula and the Federally operated Point Mugu Naval Air Station and runway at San Nicholas Island. The California Air National Guard operates from a facility adjacent to and utilizes the runways at Point Mugu NAS. In addition, there are a few privately owned landing strips scattered throughout the County.

HARBOR

The Port of Hueneme is the County's only deepwater harbor. It is located entirely within the City of Port Hueneme, about seven miles southeast of the mouth of the Santa Clara River. Serving as California's only deepwater port between Los Angeles and San Francisco, the Port of Hueneme's area of influence extends far into the southwestern United States and Western Canada. The Port is administered by the Oxnard Harbor District, which has jurisdiction over approximately 70 acres of onshore area and 10 acres of waterway; the remainder of the harbor is under U.S. Navy jurisdiction. Ventura and Channel Islands harbors provide facilities for recreational boating and commercial fishing.

PIPELINES

Major pipelines within Ventura County carry crude oil and natural gas, generally along highways and railroad lines. The major crude oil and natural gas pipelines traversing Ventura County are owned by ARCO, Chevron, Mobil, Shell, Texaco and Union Oil. Most oil companies which have operations in Ventura County have pipelines located within their oil/gas lease areas, but do not operate major transporting pipelines. Four Corners Pipeline Company, a subsidiary of ARCO, is a private pipeline company regulated by the Public Utilities Commission that transports crude oil through their own lines and connects to other pipelines as needed. There is an existing Southern California Edison fuel line originating within the Oxnard Harbor District which connects to the Ormond Beach Generating Station. Four Corners Pipeline Company operates only their own pipeline facilities, and does not own any crude oil.

The goals, policies and programs which apply to transportation/circulation are as follows:

4.2.1 *GOALS*

1. Provide for the efficient movement of persons and goods by designing, constructing, and maintaining a **Regional Road Network** and **Local Road Network** that will function at an acceptable **Level of Service (LOS)**.

2. Ensure that as **discretionary development** creates the need, existing roads within the **Regional Road Network** and **Local Road Network** are improved, and additional roads needed to complement the **Regional Road Network** and **Local Road Network** are constructed, so as to keep all such roads functioning at an acceptable **LOS**.

3. Ensure that **development** which would contribute to the cumulative need for improvements or additions to the **Regional Road Network** bears its pro-rata share of the costs of all such improvements or additions.

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4. Promote measures to reduce vehicle miles traveled and disperse peak traffic to better utilize the existing transportation infrastructure.

5. Promote the development of a safe, efficient, convenient and economical community, intercommunity and Countywide bus transit system.

6. Encourage transit providers to meet the special transportation needs of the elderly, school children, low income, physically handicapped and other low mobility groups.

7. Encourage the use of bicycling and ridesharing (e.g., carpooling, vanpooling, and buspooling) as a percentage of total employee commute trips throughout the County in order to reduce vehicular trips and miles traveled and consequently vehicular emissions, traffic congestion, energy usage, and ambient noise levels.

8. Support the continued operation of a rail system that offers efficient, safe, convenient and economical transport of people and commodities.

9. Encourage the Southern Pacific Transportation Company and the Ventura County Railway Company to improve their railroad grade crossing surfaces with such improvements as the installation of rubber railroad grade crossing surface panels.

10. Provide facilities at Oxnard and Camarillo Airports to meet the general aviation and commuter service needs of the citizens of Ventura County.

11. Strive to minimize adverse environmental and safety effects of County Airports on the surrounding communities.

12. Promote the continued and expanded use of pipelines for the transport of suitable products and materials where environmental and safety impacts can be adequately mitigated.

4.2.2 ***POLICIES***

1. **County thoroughfares** and County maintained **local roads** shall be designed and constructed in accordance with County Road Standards or better.

2. The County Road Standards and Five-Year Capital Improvement Programs shall be consistent with the goals, policies and programs of the General Plan.

3. The minimum acceptable **Level of Service (LOS)** for road segments and intersections within the **Regional Road Network** and **Local Road Network** shall be as follows:

   a. **LOS-'D'** for all **County thoroughfares** and **Federal highways** and **State highways**, in the unincorporated area of the County, except as otherwise provided in subparagraph (b);

   b. **LOS-'E'** for State Route 33 between the northerly end of the Ojai Freeway and the City of Ojai;

   c. **LOS-'C'** for all County-maintained **local roads**; and

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d. The **LOS** prescribed by the applicable city for all **Federal highways, State highways, city thoroughfares** and city-maintained **local roads** located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County (similar to Policies 4.2.2-3 through 4.2.2-6) respecting **development** in the city that would individually or cumulatively affect the **LOS** of **Federal highways, State highways, County thoroughfares** and County-maintained **local roads** in the unincorporated area of the County.

At any intersection between two roads, each of which has a prescribed minimum acceptable **LOS**, the lower **LOS** of the two shall be the minimum acceptable **LOS** for that intersection.

4. Except as otherwise provided in the Ojai Area Plan, County General Plan land use designation changes and zone changes shall be evaluated for their individual and cumulative impacts, and **discretionary development** shall be evaluated for its individual impact, on existing and future roads, with special emphasis on the following:

   (a) Whether the project would cause existing roads within the **Regional Road Network** or **Local Road Network** that are currently functioning at an acceptable **LOS** to function below an acceptable **LOS**;

   (b) Whether the project would worsen traffic conditions on existing roads within the **Regional Road Network** or the **Local Road Network** that are currently functioning below an acceptable **LOS**; and

   (c) Whether the project could cause future roads planned for addition to the **Regional Road Network** or the **Local Road Network** to function below an acceptable **LOS**.

5. Except as otherwise provided in the Ojai Area Plan, County General Plan land use designation changes and zone changes that would cumulatively cause any of the impact identified in subparagraphs (a) through (c) of Policy 4.2.2-4 shall be prohibited unless the Board of Supervisors adopts a Statement of Overriding Consideration. County General Plan land use designation changes, zone changes and **discretionary development** that would individually cause any of the impacts identified in subparagraphs (a) through (c) of Policy 4.2.2-4 shall be prohibited unless feasible mitigation measures are adopted which would ensure that the impact does not occur or unless a project completion schedule and full funding commitment for road improvements are adopted which ensure that the impact will be eliminated within a reasonable period of time. This policy does not apply to **city thoroughfares** city-maintained **local roads** or **Federal or State highways** located within a city unless the applicable city has formally adopted **General Plan** policies, ordinances, or a reciprocal agreement with the County (similar to Policies 4.2.2-3 through 4.2.2-6) respecting **development** in the city that would affect the **LOS** of **County thoroughfares** and County-maintained **local roads** and **Federal and State highways** located within the unincorporated area of the County.

6. Development that would generate additional traffic shall pay its pro-rata share of the costs of necessary improvements to the **Regional Road Network** per the County's Traffic Impact Mitigation Fee Ordinance as amended from time to time.

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7. The County shall oppose **discretionary development** within cities, and annexation to cities for the purposes of **development**, where such **development** would individually or cumulatively cause:

   (a) Any existing road within the **Regional Road Network**, or any existing County-maintained **local road**, that is currently functioning at an acceptable **LOS** to function below an acceptable **LOS**;

   (b) Any existing road within the **Regional Road Network**, or any existing County-maintained **local road**, that is currently operating below an acceptable **LOS** to have a worsening of traffic conditions; or

   (c) Any future road planned for addition to the **Regional Road Network**, or any planned future County-maintained **local road**, to function below an acceptable **LOS**.

   This policy does not apply to those cities which have formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County similar to Policies 4.2.2-3 through 4.2.2-6.

8. The County shall deny County and oppose city General Plan changes, zone changes, and **discretionary developments** which would significantly affect the future ability to construct thoroughfares, freeways, and expressways shown as Reserved R.O.W. on the Public Facilities Map (Figure 4).

9. **Discretionary development** shall be conditioned, where feasible, to minimize traffic impacts by incorporating pedestrian and bicycle pathways, ridesharing programs, transit improvements (bus turnouts, shelters, benches), and/or transit subsidies for employees or residents of the proposed **development**.

10. In the event that any railroad right-of-way within Ventura County is abandoned in the future, the County Public Works Agency and the General Services Agency shall evaluate the feasibility of acquiring such land for public use such as transit, bicycle and equestrian paths.

11. **Discretionary development** which would endanger the efficient, safe operation of an airport or would result in significant land use incompatibility with an airport shall be prohibited.

12. The Ventura County General Plan shall remain consistent with the Ventura County Master Airport Plan for Camarillo Airport and Oxnard Airport, which includes the Airport Noise Control and Land Use Compatibility Study (ANCLUC), for the purpose of ensuring compatible land uses around the Camarillo and Oxnard Airports.

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4.2.3 ***PROGRAMS***

1. The County Planning Division will periodically recommend updates to the County General Plan's Transportation/Circulation Section and the public Facilities Map. This effort will be coordinated with the PWA Transportation Department and the Ventura County Transportation Commission which provides the Congestion Management Program.

2. The County Public Works Agency (PWA) will coordinate with the County Planning Division, the Ventura County Transportation Commission, cities and Caltrans to develop a program to fund needed improvements to the **Regional Road Network** that includes all sources of funding available to both the County and the cities for inter-city road-building purposes. Roads which are impacted by new **development** should have the needed improvements financed by development fees and developer contributions. Roads not impacted by new **development** should have needed improvements financed by revenue sources dedicated for transportation purposes, such as State and Federal gasoline taxes, Transportation Development Act funds, etc. Where these funding sources prove inadequate to meet projected needs, they should be augmented by other sources such as special assessment districts, area of benefit funds, etc.

3. The County Public Works Agency will continue to review environmental documents for **development** projects within cities and adjoining counties to ensure that all individual and cumulative adverse impacts to the **Regional Road Network** and County-maintained **local roads** have been adequately evaluated and mitigated to insignificant levels. If it appears potential impacts are identified, PWA will bring this information to the attention of the Board of Supervisors.

4. The County's Legislative Analyst, with the support of the Public Works Agency, will continue to lobby for passage of Federal and State legislation/appropriations which would improve the **Regional Road Network** consistent with the County General Plan.

5. The County Public Works Agency Transportation Department and the County Transportation Commission will continue as the County agencies responsible for transit planning.

6. The County Department of Airports will continue to implement the noise abatement and improved public relations program.

7. The County Department of Airports will periodically update the Camarillo and Oxnard Airport Master Plans.

8. The Public Works Agency will continue to coordinate with the Port of Hueneme-Oxnard Harbor District, the cities of Port Hueneme and

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Oxnard, and Cal-Trans to ensure an adequate road network is available to accommodate projected harbor related commerce.

9. The County Sheriff's Department Office of Emergency Services will annually review and revise the Major Transportation Accidents Contingency section of the County Multihazard Functional Plan.

4.3 WATER SUPPLY FACILITIES

Ventura County's water supply is obtained from three major sources: groundwater, surface water, and imported water. A small amount of reclaimed water also is used.
There are three major water wholesalers which provide water to the various retail water purveyors throughout Ventura County. The Casitas Municipal Water District delivers wholesale water from Lake Casitas to many purveyors in the Ventura River drainage. The United Water Conservation District is responsible for collection and distribution of wholesale water throughout most of the Santa Clara River Valley. Lake Piru is United's reservoir for later which is later released into the underground aquifers for later urban and agricultural use. Calleguas Municipal Water District is responsible for providing imported water to water purveyors in the southeastern portions of the County.

There are about 178 water purveyors in Ventura County, which include 6 city systems, 8 privately-owned companies, 4 other public water purveyors, 17 special water districts, and more than 100 mutual water companies, and other public and private systems of varying sizes (Navy bases, Navy housing, mobile home parks, etc.).

The goals, policies and programs which apply to water supply facilities are as follows:

4.3.1 *GOALS*

1. Ensure the provision of water in quantities sufficient to satisfy current and projected demand.

2. Encourage the employment of water conservation measures in new and existing **development.**

3. Encourage the continued cooperation among water suppliers in the County in meeting the water needs of the County as a whole.

4.3.2 *POLICIES*

1. All **development** which requires potable water shall be provided a permanent potable water supply of adequate quantity and quality. Water systems operated by or receiving water from Casitas Municipal Water District, the Calleguas Municipal Water District or the United Water Conservation District will be considered permanent supplies unless determined otherwise by the district. When the proposed water supply is to be drawn exclusively from wells in areas where groundwater supplies have been determined by the Environmental Health Division or the Public Works Agency to be questionable or inadequate, the developer shall be required to demonstrate the availability of a permanent potable water supply for the life of the project.

2. **Discretionary development** shall be conditioned to incorporate water **conservation** techniques and the use of drought resistant native plants pursuant to the County's Guide to Landscape Plans.

4.3.3 *PROGRAMS*

1. The County and the major water wholesalers and purveyors should jointly support the Ventura County Water Conservation Program. Participation in the countywide Program includes funding the position of water conservation coordinator and water conservation assistant. Programs promote water efficiency in urban, agriculture and business

and industrial areas. Activities include staffing the Water Conservation Landscape Task Force Committee, updating annual water use information, publishing newsletters and brochures, coordinating commercial and industrial water efficiency programs and informing the public about water conservation.

2. The Planning Division, with the support of the Public Works Agency, will continue to coordinate with water districts to establish a data base on actual available supply, projected use factors for types of **development** and threshold limits for **development** within available water resources.

3. The County Public Works Agency (Water Resources and Development Department) and the three major water wholesale agencies (Casitas, Calleguas and United) will continue to pursue the use of reclaimed water as a long-term source for agricultural irrigation.

4. The County Building and Safety Division will enforce the County's Efficient Plumbing Devices Ordinance (low water use plumbing fixtures).

4.4 WASTE TREATMENT AND DISPOSAL FACILITIES

The Waste Treatment and Disposal Facilities Section of the Public Facilities and Services Chapter: 1) satisfies the requirement of California Government Code Section 65302(a) for the designation of solid and liquid waste disposal facilities in the Land Use Element of the General Plan, 2) satisfies State policy described in Section 66780(b) indicating that Countywide Integrated Waste Management Plans (CIWMP) be consistent with General Plans, and 3) provides, in part, the means necessary for determining consistency between proposed facilities and the General Plan required by Government Code Sections 66796.32(c) and 66796.41(a) relative to the issuance of Solid Waste Facilities Permits.

The following types of waste treatment and disposal facilities are included in this Section:

- **On-Site Septic Systems:** On-site septic systems, also referred to as individual sewage disposal systems (ISDS), are those liquid waste systems which dispose of sewage generated by individual residences and businesses in unsewered areas. A conventional ISDS usually includes a septic tank and either a seepage pit or leach lines. Mound systems and subsurface sand filtration systems are two alternative ISDS which may be approved for use in areas where there are shallow soils over bedrock, high groundwater (either seasonal or permanent), or fractured bedrock. They are restricted for use only under specific conditions and guidelines in those areas of the County where community sewer systems are not available and on-site conditions preclude the use of conventional septic tank/soil absorption systems. Only domestic sewage (i.e., human waste from everyday living activities) can be discharged into a septic system.

- **Sewage Treatment Facilities:** Sewage treatment facilities collect water used for domestic, commercial and industrial purposes, treat it to remove organic and inorganic waste materials, and discharge the treated effluent to the environment. Operation of these facilities is regulated by State and Federal agencies to protect the County's surface and groundwater from biological and chemical pollutants. There are two categories of Sewage Treatment Facilities. They are as follows:

  Community Sewage Treatment Facilities are plants that treat liquid waste that is received from off of the plant site. They include public agency and privately owned facilities. These facilities are identified on the General Plan's Public Facilities Map (Figure 4).

  On-Site Wastewater Treatment Facilities are plants that treat liquid waste that is generated on the same project site where the plant is located, with both the plant and the project site under common ownership. These plants are sized and explicitly restricted to serve only the project site, and cannot serve uses off-site or under different ownership.

- **Solid Waste Disposal Sites:** Solid waste disposal sites are those facilities for the final deposition of wastes onto land. Wastes are categorized by the State into four general types; Hazardous, Designated, Municipal and Inert Waste. Currently, only certain Designated, all Nonhazardous and Inert wastes can be legally disposed of to land in Ventura County. Hazardous and certain types of Designated wastes must be transported outside of the County for disposal. Waste management units (disposal sites) for designated and nonhazardous wastes are operated pursuant to requirements and criteria established by the State Water Resources Control Board (SWRCB) and the California Integrated Waste Management Board (CIWMB) as well as many other agencies. They are regulated and inspected by the staff of the Regional Water Quality Control Board (RWQCB), and the Ventura County Environmental Health Division, which is the Local Enforcement Agency (LEA) for the CIWMB.

- **Waste Transfer Stations:** Waste transfer stations are those facilities utilized to receive wastes from outside their permit boundaries to temporarily store and/or separate wastes or transfer the solid wastes directly from smaller to larger vehicles for transport.

- **Off-Site Waste Treatment Facilities:** Off-site waste treatment facilities are those facilities which accept wastes from outside their permit boundaries for treatment to change the physical, chemical, or biological characteristics of the waste so as to render it less harmful to the quality of the waters of the State, safer to handle, easier to contain or manage, including use as a fuel, nutrient or soil amendment.

Section 4.4 of the Public Facilities and Services Appendix describes each type of waste treatment and disposal facility by location and waste handled.

The goals, policies and programs which apply to waste treatment and disposal facilities are as follows:

4.4.1 *GOALS*

1. Ensure the provision of adequate individual and public sewage/ waste collection, treatment and disposal facilities to meet the County's current and future needs in a manner which will protect the natural environment and ensure protection of the public's health, safety and welfare.

2. Ensure continuous waste disposal capacity to meet the County's current and projected waste disposal needs. After consideration of waste reduction potential, disposal capacity shall be provided so as to protect the natural environment and ensure the protection of the public's health, safety and welfare.

4.4.2 *POLICIES*

1. **Community sewage treatment facilities** and **solid waste disposal sites** shall be deemed consistent with the General Plan only if they are designated on the Public Facilities Map. **On-site septic systems** (i.e., **individual sewage disposal systems**), **on-site wastewater treatment facilities**, **waste transfer stations**, **off-site waste treatment facilities** and on-site storage facilities are consistent with the General Plan if they conform to the **Goals Policies** and **Programs** of the General Plan.

2. Any subdivision, or discretionary change in land use having a direct effect upon the volume of sewage, shall be required to connect to a public sewer system. Exceptions to this **policy** to allow the use of septic systems may be granted in accordance with County Sewer Policy. Installation and maintenance of septic systems shall be regulated by the County Environmental Health Division in accordance with the County's Sewer Policy, County Building Code, and County Service Area 32.

3. In order to reduce the need for additional wastewater treatment capacity, the County shall:

   - o require new **discretionary development** to utilize water-conserving design features;
   - o encourage the retrofitting of existing uses and buildings with water-conserving devices;
   - o require that new wastewater lateral and trunk collection lines be designed to allow the minimum feasible amount of inflow and infiltration into the wastewater collection system.
   - o periodically inspect existing lateral and trunk collection lines to identify areas subject to excessive inflow and infiltration and remedy identified problems as feasible.

4. **Discretionary development** adjacent to existing and proposed waste treatment, transfer and disposal sites, as identified in the Countywide Integrated Waste Management Plan, shall not conflict with the current and anticipated future use of these waste facilities.

5. Waste treatment and disposal operations shall be designed and conducted in a manner that is compatible with surrounding land uses such that the potential impacts are mitigated to less than significant levels, or, where no feasible mitigation measures are available, a statement of overriding considerations consistent with CEQA shall be adopted. At the end of such operations, the site shall be restored to a use compatible with surrounding land uses.

6. Applicants for **discretionary development** shall be encouraged to employ practices that reduce the quantities of wastes generated and shall be requested to engage in recycling activities to further reduce the volume of waste disposed of in landfills.

4.4.3 ***PROGRAMS***

1. The Public Works Agency, with the support of the Planning Division, will periodically update the County's Water Quality Management (208) Plan to incorporate revised population, land use and sewer plant capacity forecasts.

2. The County Public Works Agency will continue to work cooperatively with sanitation districts in the County toward the improvement and expansion of the existing public sewer systems consistent with the County General Plan.

3. The Environmental Health Division will continue to pursue the implementation of a **program** of regular inspection, monitoring and maintenance of **individual sewage disposal systems**, with an emphasis on an annual inspection of targeted **individual sewage disposal systems.**

4. The Solid Waste Management Department will investigate long-range solutions to solid waste management, emphasizing ecologically and environmentally sensitive solutions, including source separation, recycling, composting and the like.

5. The Solid Waste Management Department will prepare, maintain and update the Countywide Integrated Waste Management Plan as necessary.

4.5 PUBLIC UTILITIES

Public utilities, as addressed in this section, includes electrical power, natural gas, telephone service, cable television service and communication equipment.

Electrical power to Ventura County is provided by the Southern California Edison Company, which consists of generation plants, substations and transmission lines. Southern California Edison presently operates two major generating plants in Ventura County: (Mandalay and Ormond Beach), both of which are located along the coastal area of the City of Oxnard.

Southern California Gas Company supplies natural gas to all of Ventura County through a fixed transmission and distribution system.

Telephone service is provided by Pacific Bell and General Telephone Company of California (GTE). GTE's State Headquarters is located in Thousand Oaks, serving a twenty county area with more than 330 communities.

Seven cable television service companies offer cable television services to residents of Ventura County.

County communication equipment, operated by General Services Agency, includes radio, microwave, and telephone switching equipment, which is located at 17 separate sites, including each of the three community colleges. In addition, there is privately operated communications equipment (including radio and television transmitting and receiving antennas, radar stations, and microwave towers) scattered throughout the county's hilltops.

The goal and policies which apply to public utilities are as follows:

4.5.1 *GOAL*

Promote the efficient distribution of public utility facilities and transmission lines to assure that public utilities are adequate to service existing and projected land uses, avoid hazards and are compatible with the natural and human resources.

4.5.2 *POLICIES*

1. New gas, electric, cable television and telephone utility transmission lines shall use or parallel existing utility rights-of-way where feasible and avoid scenic areas when not in conflict with the rules and regulations of the California Public Utilities Commission. When such areas cannot be avoided, transmission lines should be designed and located in a manner to minimize their visual impact.

2. All transmission lines should be located and constructed in a manner which minimizes disruption of natural vegetation and agricultural activities and avoids unnecessary grading of slopes when not in conflict with the rules and regulations of the California Public Utilities Commission.

3. **Discretionary development** shall be conditioned to place utility service lines underground wherever feasible.

4.6 FLOOD CONTROL AND DRAINAGE FACILITIES

The Ventura County Flood Control District is a special district that was created in 1944 for the purpose of providing for the control of floods and storm waters originating within the District (County) or originating outside the District and flowing into it, to conserve such waters for beneficial use, to prevent waste or exportation of waters and to reclaim drainage, storm, and flood waters. The District includes all of Ventura County except the offshore Channel Islands of Anacapa and San Nicolas. The County is divided into four numbered flood zones: Zones 1-4. Boundaries of the first three zones generally follow the limits of the three major drainage systems of Ventura County:

- Zone 1: Ventura River Watershed
- Zone 2: Santa Clara River Watershed
- Zone 3: Calleguas Creek Watershed

- Zone 4: Includes the Cuyama River Basin and the remainder of the County.

In addition to the Ventura County Flood Control District, several other agencies responsible for providing drainage of storm waters from, or conveyance of storm waters through, the County include: (a) the various cities; (b) drainage and storm drain districts, and (c) Ventura County itself.

The Ventura County Flood Control District defines **red line channels** as channels over which the Flood Control District exercises regulatory jurisdiction. Regulatory jurisdiction does not imply ownership as some of the **red line channels** are owned by the Flood Control District and some are owned by others. These **red line channels** can either be improved or unimproved.

According to the County Flood Control District, there are a total of 486.46 miles of channels under County Flood Control regulatory jurisdiction.

The County Flood Control channels run the gamut from fully improved concrete channels to unimproved, natural channels. Fully improved channels include: rectangular, trapezoidal, box and pipe. Other channels include natural, shaped (but maintained) and pipe and wire channels.

The staff for the County Flood Control District is the Flood Control Department of the Public Works Agency. The Flood Control Department is also the responsible sponsoring local agency for Federal flood control projects throughout the County, and provides coordination for the Federal Flood Insurance Program. In addition, the Department is coordinating with the Federal Government in studying coastal erosion and control.

Other functions include coordination of the importation of water into the County, flood fighting and disaster operations, review of land **developments** for flood hazards and effects on water quality, issuance of Watercourse Permits, and operation of a Flood Warning System.

The goal, policies and program which apply to flood control and drainage facilities are as follows:

4.6.1 *GOAL*

Provide adequate and appropriate flood control and drainage facilities to protect life and property from damage or destruction from flood and storm waters.

4.6.2 *POLICIES*

1. All necessary flood control and drainage facilities shall be constructed to meet the minimum standards of the Public Works Agency and the County Flood Control District consistent with the **goals, policies** and **programs** of the General Plan.

2. Drainage courses shall be left in their natural state as much as possible.

3. **Discretionary development** shall be conditioned to provide flood control and drainage facilities deemed by the Public Works Agency and Flood Control District as necessary for the development, and shall be required to contribute toward flood control facilities required by cumulative **development.**

4.6.3 *PROGRAM*

The Ventura County Flood Control District will periodically update the Comprehensive Plan for Flood Control.

4.7 LAW ENFORCEMENT AND EMERGENCY SERVICES

The Sheriff is the Chief Law Enforcement Officer for the County of Ventura and, as such, has jurisdiction over its unincorporated areas. In 1965, the Sheriff, through a contract, began to provide law enforcement services for the Cities of Thousand Oaks and Camarillo. In 1980, the City of Ojai also contracted for law enforcement services. The City of Moorpark became the fourth municipality to contract in July 1984. More recently, the City of Fillmore contracted for police services in June 1987. To accommodate the responsibilities of the Office of the Sheriff, the department is comprised of seven major divisions: Support Services, West County Patrol, East Valley Patrol, Central County Patrol, Special Services, Custody, and Court Services. The Sheriff's Department is headquartered in Ventura and maintains stations in Camarillo, Fillmore, Lockwood Valley, Moorpark, Ojai, and Thousand Oaks. A new East Valley Law Enforcement Facility located between Thousand Oaks and Simi Valley opened in 1989. As of 1991, the Sheriff's Department was staffed by 927 personnel; 601 are sworn officers.

Inmates in Ventura County are housed at three major facilities: the Main Jail/Pre-Trial Facility located at the Ventura County Government Center in Ventura, and most of the remaining inmates are housed at the Ventura County Branch Jail-Honor Farm Facility at 370 West Baldwin Road in the Ojai Valley. An additional smaller facility (refurbished former U.S. Forest Service Camp), was established in Rose Valley in 1990, to house 160 inmates. The East Valley Substation at 2201 E. Olsen Road in Simi Valley has a temporary jail holding facility. Overcrowding of the Main Jail and Honor Farm facilities requires research and planning for future needs. With financial assistance from voter approved bond issues plus County funds, an approximately 600 bed sentenced inmate facility is now in the final planning stages.

Both the Municipal Court and Superior Court are located in the Hall of Justice, located at the Ventura County Government Center Complex at 800 South Victoria Avenue, Ventura. Simi Valley also has a Municipal Court Branch located at 3855F Alamo Street, Simi Valley.

According to County Ordinance 2538, the Sheriff is Director of Disaster (Emergency) Services. Emergency Services planning in Ventura County is conducted in the Sheriff's Department, Support Services Division, Office of Emergency Services. The staff coordinates planning at each government level.

The eight major elements of the Office of Emergency Services work program includes:

1. Emergency Organization Planning and Management.
2. Direction, Control and Warning.
3. Population Protection.
4. Radioactive Contamination, Monitoring and Control.
5. Public Disaster Related Public Education and Emergency Public Information.
6. Emergency Support Services.
7. Hazard Analysis and Mitigation.
8. Multihazards Functional Planning Guidance.

The goals, policies and programs which apply to law enforcement and emergency services are as follows:

4.7.1 *GOALS*

1. Provide for the protection of the public through effective law enforcement and emergency services.

2. Ensure that **discretionary development** provides adequate private security for the prevention of local crime.

3. The **goals** of the Sheriff's Department are to:

   - Provide optimum and efficient law enforcement services within the department's jurisdiction.

- Provide full investigative services including major crime and crime lab services as requested Countywide.

- Maintain and operate both pre-trial and sentenced custodial facilities and services for all adult clientele.

- Provide court services and security for both the Superior and Municipal Courts. Provide all aspects of civil court process services.

4. The overall **goal** of the Corrections Services Agency is to provide for community protection by unifying and coordinating correctional services in Ventura County.

5. The overall **goal** of the Municipal Court is to:

   - Process all vehicular violations, and certain parking violations originating from municipal police agencies, Sheriff, Highway Patrol, and various other State and district enforcement agencies.

   - Process all filings involving small claims wherein the jurisdiction does not exceed $1,500, and civil process involving suits not exceeding $25,000.

   - Process misdemeanor offenses punishable by fine or imprisonment in County Jail, not to exceed one year. Offenses classified as infractions, and has jurisdiction over felony preliminary hearings.

6. The overall **goal** of the Superior Court is to provide trial court judicial services for all cases presented to it within its constitutionally established jurisdiction.

7. The overall **goal** of the Ventura County Sheriff's Department Office of Emergency Services is to save lives and protect property by developing **programs** and emergency operational capabilities that mitigate, prepare for, respond to, and recover from any emergency or disaster - whether peacetime or war-related.

4.7.2 ***POLICIES***

1. The Sheriff's Department shall continue to review **discretionary** permits to ensure that an adequate level of law enforcement can be provided.

2. **Discretionary development** shall be conditioned to provide adequate site security during the construction phase (e.g., licensed security guard and/or fencing around the construction site, and all construction equipment, tools, and appliances to be properly secured and serial numbers recorded for identification purposes).

3. **Discretionary development** shall be conditioned to provide adequate security lighting (e.g., parking lots to be well lighted with a minimum 1 foot candle of light at ground level, lighting devices to be protected from the elements and constructed of vandal resistant materials and located high enough to discourage anyone on the ground from tampering with them).

4. **Discretionary development** shall be conditioned to avoid landscaping which interferes with police surveillance (e.g., landscaping must not cover any exterior door or window, landscaping at entrances and exits or at any parking lot intersection must not block or screen the view of a seated driver from another moving vehicle or pedestrian, trees

must not be placed underneath any overhead light fixture which would cause a loss of light at ground level).

5. The County Sheriff's Department shall maintain mutual aid agreements with incorporated cities to assure efficient service delivery and law protection to all areas of the County.

4.7.3 *PROGRAMS*

1. The County Sheriff's Department will continue to support efforts to organize neighborhood, rural, and industrial crime prevention programs, and conduct residential security surveys.

2. The County Sheriff's Department Office of Emergency Services will maintain and periodically update the Ventura County Multihazard Functional Plan including mitigation measures, preparedness, response, and recovery for the following ten hazard specific contingency sections (i.e. plans):

   - "Major Earthquake"
   - "Major Hazardous Material Incident"
   - "Flood Hazard"
   - "Dam Failure"
   - "Nuclear Defense Emergencies" (Nuclear Attack Threat Assessment)
   - "Wildland Fire"
   - "Major Transportation Accidents"
   - "Landslide"
   - "Tsunami" (& Seiche)
   - "Off Shore Oil Incidents"

3. The Office of Emergency Services will conduct public education **programs** for the citizens of the County on prevention and preparedness of natural and war-related hazards.

4.8 FIRE PROTECTION

The Ventura County Fire Protection District is a special district formed on May 16, 1928, and governed by the Board of Supervisors. The Ventura County Fire Protection District protects life and property by providing fire prevention, fire suppression, fire investigation, a hazardous materials response team, and rescue and related emergency services. The County Fire Protection District operates 30 fire stations that serve the municipalities of Camarillo, Moorpark, Ojai, Port Hueneme, Simi Valley, and Thousand Oaks, and the unincorporated regions of Ventura County. The Fire Protection District, as of 1991, had a staff of 390 fire suppression personnel plus an additional 40 reserve firefighters and 70 support personnel. The County has mutual aid agreements with all adjacent counties, incorporated cities within the County military installations and other U.S. agencies. Ventura County Fire Protection District has also signed a Memorandum of Understanding to establish a coordinated effort with ten other Federal, State and local agencies to accomplish joint arson investigation and resource sharing. Besides the actual fighting of fires, a great deal of time is spent by the Fire Protection District on preventive measures and preparation for combating fires. Fire prevention consists of making inspections of buildings, schools, and homes, making recommendations for fire safety, and enforcing the Uniform Fire Code. Fire Prevention programs are also sponsored through the schools, service clubs, and other organizations.

The cities of Oxnard and Ventura have their own separate fire departments staffed with paid firefighters at stations located throughout each city. The cities of Fillmore and Santa Paula each have their own volunteer fire departments. The Los Padres National Forest area of the County is served by the U.S. Forest Service.

The goal and policies which apply to fire protection are as follows:

4.8.1 *GOAL*

Strive to reduce the loss of life and property by providing effective fire prevention, suppression and rescue services and facilities.

4.8.2 *POLICIES*

1. The County Fire Protection District-Bureau of Fire Prevention shall continue to review all new **development** to ensure that an adequate level of fire protection can be provided.

2. **Discretionary development** shall be permitted only if adequate water supply, access and response time for fire protection can be made available.

3. The County Fire Protection District shall continue to maintain mutual aid agreements with all adjacent cities and counties, incorporated cities within the County, local military installations and the U.S. Forest Service.

4. The County Fire Protection District shall continue to participate in a coordinated effort with other Federal, State and local agencies to accomplish joint arson investigation and resource sharing.

5. Fire stations shall be sited in locations central to the area served and on or near arterial highways so as to minimize call response time.

4.9 EDUCATION AND LIBRARY FACILITIES AND SERVICES

There are 20 public school districts serving the elementary and secondary school needs in Ventura County:

- Conejo Valley Unified School District (Thousand Oaks, Newbury Park and Westlake)
- Fillmore Unified School District (Fillmore, Bardsdale, Piru and Northeast portion of the County)
- Moorpark Unified School District (Moorpark)
- Oak Park Unified School District (Oak Park and Agoura)
- Ojai Unified School District (Ojai Valley)
- Simi Valley Unified School District (Simi Valley)
- Ventura Unified School District (Ventura, Montalvo, Oak View and Saticoy)
- Hueneme Elementary School District (Oxnard, Port Hueneme, and Hollywood Beach)
- Ocean View Elementary School District (Southern portion of Ventura County including Santa Monica Mountains Area)
- Oxnard Elementary School District (Oxnard and beach areas)
- Rio Elementary School District (El Rio and Oxnard areas)
- Mesa Union Elementary School District (rural area between Saticoy and Somis)
- Pleasant Valley Elementary School District (Camarillo, Camarillo Heights and Las Posas)
- Somis Union Elementary (Somis)
- Briggs Elementary School District (West rural Santa Paula)
- Mupu Elementary School District (North rural Santa Paula)
- Santa Clara Elementary School District (East rural Santa Paula)
- Santa Paula Elementary School District (Incorporated Santa Paula)
- Oxnard Union High School District (Oxnard, Port Hueneme and Camarillo area)
- Santa Paula Union High School District (Santa Paula area)

The primary function of the County Superintendent of Schools is to act as an intermediary agency between the Federal and State Government and the local school districts and private schools. In this capacity, the office assists school districts and private schools with administrative, business and fiscal, and

educational affairs through the implementation of special programs, services, and legislative mandates.

The Ventura County Superintendent of Schools also provides a special education program, occupational training program, Gateway Community School and Court School. A Countywide School District Facility Needs Study was conducted by the Ventura County Superintendent of Schools Office surveying each school district's anticipated school facilities needs through the year 2000 (see Public Facilities and Services Appendix).

The Ventura County Community College District is responsible for providing public community college education in Ventura County. The Community College District operates three colleges: Ventura College, Moorpark College, and Oxnard College. These colleges serve all communities in the County, except for an area in the northwestern part of the County served by the Santa Maria Community College District.

Ventura County is served by four independent public library jurisdictions: Ventura County Library Services Agency, the City of Oxnard, Santa Paula Union High School District and the City of Thousand Oaks.

The Ventura County Library Services Agency operates 16 community, and special libraries. The County Library administrative office is at 4274 Telegraph Road, Ventura and its Central Services operations are at 651 East Main Street, Ventura. Community and special libraries are located as follows:

- Avenue Library (Ventura)
- Camarillo
- El Rio
- Fillmore
- E. P. Foster (Ventura)
- Historical Museum Library (Ventura)
- Meiner's Oaks
- Moorpark
- Oak Park
- Oak View
- Ojai
- Piru
- R.B. Prueter (Port Hueneme)
- Saticoy
- Simi Valley
- H.P. Wright Library (Ventura)

The County Law Library is located on the first floor of the Hall of Justice at the County Government Center. Its collection of books, journals and other publications are accessible for examination and reading by the public. Its primary use is by the judiciary, state and county officials and members of the Bar Association.

The goals, policies and programs which apply to education and library facilities and services are as follows:

4.9.1 *GOALS*

1. Promote quality public education services and educational facilities in order to achieve maximum opportunity for the education of residents of all ages and socioeconomic levels.

2. Goals of the Office of the County Superintendent of Schools are:

   - To provide leadership and direction in the development and implementation of the best possible educational programs throughout Ventura County.

   - To provide services, programs, and support for the purpose of maintaining the efficient and effective operation of district and County educational programs.

   - To operate Countywide educational programs for students when it is not feasible or practical for local districts to do so.

   - To maintain a public information program on educational matters.

- To assist school district implementation of educational programs or procedures as mandated, requested or recommended by the State Department of Education.

3. The overall goal of the Ventura County Community College District is to meet the educational needs of all eligible students by offering comprehensive programs and services.

4. The goal of the Ventura County Library Services Agency is to provide to all individuals free access to books, other materials, and services to support their informational, recreational, cultural and self-education needs.

4.9.2 ***POLICIES***

1. School sites shall be integrated with parks wherever possible.

2. If school facilities within the unincorporated portion of the County are no longer needed for public education, consideration should be given to the use of the sites/facilities for parks and recreation, use by private schools and other similar community uses.

3. School facilities should be available for community activities when feasible.

4. Community library facilities shall be sited in central locations of the community to be served. Site selection criteria shall consider:

   - Convenient access, preferably on or near the Community's major vehicular and pedestrian traffic routes.

   - Adequate off-street parking.

4.9.3 ***PROGRAMS***

1. The Planning Division will continue to work with the County Superintendent of Schools Office and the various school districts in the County concerning school site dedications and fee assessments.

2. The County Planning Division will continue to coordinate an exchange of information with school districts regarding school needs and new residential developments.

3. The Library Services Agency will continue to work with cities served in the development of financial partnerships to expand or replace existing facilities.

4.10 PARKS AND RECREATION

In Ventura County the abundance of natural recreation resources has given rise to establishment of many recreation facilities. A wide variety of agencies provide these facilities. At the Federal level, Ventura County contains the Los Padres National Forest, the Santa Monica Mountains National Recreation Area and the Channel Islands National Monument. State parks and open space lands are located along the coast, within the Santa Monica Mountains area and at Hungry Valley State Recreation Area. The above facilities attract patronage from a much greater area than Ventura County alone. The Casitas Municipal Water District and United Water Conservation District provide facilities at Lake Casitas and Lake Piru respectively. At the local level, facilities are provided by the County, the cities and three recreation and park districts.

Recreation facilities can be divided into two main categories: regional and local. **A regional recreation area** is an extent of land which, by its unique natural character or unusual or extensive development, offers recreation opportunities that attract patronage from beyond the local vicinity without regard to physical, political or municipal boundaries. **Local parks** provide facilities to serve the daily needs of a neighborhood or group of neighborhoods

within an urban community. The specific facilities should be determined by assessing the needs of the community. Recreation areas can also serve the ancillary purposes of preserving open space, providing water resources, buffering urban land uses and preserving biological, cultural and scenic resources.

The majority of County residents receive local park service from a local city or recreation and park district. The Pleasant Valley Recreation and Park District provides local park facilities in the Camarillo area. The Rancho Simi Recreation and Park District serves the Simi Area and the Rancho Conejo Recreation and Park District provides local and some regional facilities and an extensive trail system in the Thousand Oaks vicinity. The above District's service areas extend into unincorporated territory outside the principal cities. Other incorporated cities provide recreation services through their own recreation departments. Some cities also operate regional recreation facilities. The Public Facilities and Services Appendix contains a more extensive listing of recreation facilities.

The County of Ventura provides recreation services through the General Services Agency, Recreation Services. The primary focus of the County is to provide regional recreation facilities. The County also provides local park facilities in unincorporated areas of the County not served by other agencies. The County operates community recreation centers in Oak View, Casitas Springs, El Rio, Saticoy and Piru.

Trails are another category of recreation facility. The Los Padres National Forest and Santa Monica Mountains National Recreational Area contain extensive trail systems. Local trails exist in many areas of the County. The County, and many other public and private organizations, have been attempting to establish an interconnected trail network throughout the County. Trails can be established on public lands and easements or by obtaining easements through private lands.

Funding limitations on recreation services are a perennial problem. Decreasing availability of Federal and State revenues together with local funding shortages threaten the ability of the County to keep pace with service demand. Innovative utilization of donations, grant sources, volunteer labor and public-private joint ventures can fill the revenue gap. The County has adopted local parkland dedication requirements, (Quimby Ordinance), pursuant to the State Subdivision Map Act to fund the development and renovation of neighborhood and community recreation facilities.

The goals, policies and programs which apply to recreation facilities are as follows:

4.10.1 *GOALS*

1. Acquire, develop and operate a system of recreation facilities to meet the recreation needs of County residents.

2. Pursue an equitable, independent, and reliable method of financing the planning, acquisition, **development**, operation and maintenance of recreation facilities.

3. Promote a coordinated effort by all government entities to assure the provision of a complete range of recreational opportunities for all ages and interests in all areas of Ventura County.

4. Promote the multi-use of existing physical resources through coordination with other public and quasi-public agencies (i.e., utility easements, flood control easements, school district facilities, etc.).

5. Establish or assist in the establishment of a Countywide network of trails which will meet the needs of equestrians, bicyclists, hikers and other trail user groups.

6. Provide, or encourage the provision of, **local park** and recreation facilities and **programs** to serve the residents of the unincorporated territory of Ventura County where an equitable financing plan can be established with minimal use of County General Fund revenues.

7. Ensure compatibility between recreation facilities and adjoining land uses.

4.10.2 *POLICIES*

1. The General Services Agency shall coordinate the location, planning, and functional use of all County recreation facilities with affected local governmental entities and, where feasible, promote joint acquisition and/or development to assure effective coverage of all needs.

2. The General Services Agency and Planning Division shall review discretionary entitlement requests for impact to recreation opportunities and resources.

3. The County shall maintain and enforce the local parkland dedication requirements (Quimby Ordinance), to acquire and develop neighborhood and community recreation facilities. Parkland dedication shall be based on a standard of five acres of local parkland per thousand population, including neighborhood and community parks.

4. **Discretionary development** which would obstruct or adversely impact access to a public recreation resource shall be conditioned to provide public access as appropriate.

5. Developers shall be encouraged to make unused open space available for recreation.

6. The County shall require reservation of land for public purchase, pursuant to the County Subdivision Ordinance, where requested by a recreation agency.

7. County facilities (e.g., flood control channels and easements) shall be made available for recreational use as appropriate.

8. New recreation facilities shall be consistent with the General Plan and Zoning Ordinance.

4.10.3 *PROGRAMS*

1. The General Services Agency will prepare and update a County Recreation Plan to evaluate demand, establish facility needs, and prioritize proposed facility development.

2. The General Services Agency will develop, implement and maintain an ordinance to collect development fees to provide for regional recreation facility development.

4.11 OTHER PUBLIC BUILDINGS AND GROUNDS

Federal installations, facilities and lands include defense installations (Point Mugu Pacific Missile Test Center and Naval Air Station and Port Hueneme's U.S. Naval Construction Battalion Center) and recreation and conservation oriented facilities and lands, including Los Padres National Forest. San Nicolas Island is part of the Navy's Pacific Missile Test Center Sea Test Range and is also one of the State's key wildlife and environmental preservation areas. Other Federal lands and facilities, including the Santa Monica Mountains National Recreation Area, Anacapa Island and the Channel Islands National Park Visitor Center, are discussed in the Public Facilities and Services Appendix (Section 4.10 on Parks and Recreation).

- Point Mugu Pacific Missile Test Center and Naval Air Station: The 4,500 acre Point Mugu facility is located at the western end of the agricultural lands of the Oxnard Plain, six miles southeast of Oxnard and 7½ miles southwest of Camarillo. Approximately 8,000 military and civilian personnel work at Point Mugu with an additional 3,000 dependents living in the area near the base. The main base complex houses extensive test

laboratory and support facilities, and two runways capable of handling all modern aircraft types.

- Naval Construction Battalion Center Port Hueneme: Another Federal defense installation located in Ventura County is the U.S. Naval Construction Battalion Center located within the City of Port Hueneme. The center is home of the Navy's famous Seabees. This base covers more than 1,600 acres, has more than 40 miles of roads and streets and 26 miles of railroad tracks.

- Los Padres National Forest: The Los Padres National Forest covers 555,618 acres or 868.15 square miles of the 1,884 square mile area of Ventura County (approximately 46% of the land area of the County). Facilities within Los Padres National Forest include roads, trails, campgrounds, dams and buildings.

- San Nicolas Island: The 14,000 acre (21.875 square miles) island is located approximately 60 miles off the coast of Point Mugu. San Nicolas Island is part of the Navy's Pacific Missile Test Center Sea Test Range. Approximately 350 employees, including military and civilian, staff the outlying landing field and the Naval Facility at San Nicolas Island. San Nicolas Island is also one of the California's key wildlife and environmental preservation areas.

State public facilities and lands include the Camarillo State Hospital and California State Youth Authority (Ventura School). Hungry Valley State Vehicular Recreation Area and the various State parks and beaches are discussed in Section 4.10 of the Public Facilities and Services Appendix.

- Camarillo State Hospital: Camarillo State Hospital, built in 1932, is located 4 miles southeast of Camarillo on a 976 acre site, with the farm portion of 435 acres leased out. The State Hospital is licensed for 1,503 beds for the mentally disabled and developmentally disabled.

- California State Youth Authority (CYA) - Ventura School: CYA is located on a 110 acre site at the southwest corner of Wright Road and Beardsley Road, Camarillo, approximately 3 miles northwest of Camarillo City Hall. This site was formerly a Youth Authority institution for female offenders only. It presently a co-ed institution for youthful offenders ages 17-25.

Ventura County owns or leases a multitude of buildings and facilities. Most of these have been addressed in previous section of the Public Facilities and Services Chapter and in the Public Facilities and Services Appendix.

Ventura County buildings and facilities not previously discussed in earlier portions of the Public Facilities and Services Chapter are owned or leased by the following County agencies and/or departments:

- Agricultural Department (Agricultural Commissioner)
- Animal Regulation Department
- General Services Agency (GSA)
- Health Care Agency (HCA)
- Personnel Department
- Public Social Services Agency (PSSA)
- Public Works Agency (PWA)
- Resource Management Agency (RMA)
- Solid Waste Management Department (SWM)

The goals, policies and programs which apply to other public buildings and grounds are as follows:

4.11.1 *GOALS*

1. Ensure a continuing, cooperative planning and working relationship between the County of Ventura and the respective State and Federal Government Agencies in sharing information relative to existing and proposed State and Federal facilities.

2. Ensure that Federal and State facility planners are adequately informed of applicable County regulations, standards and land use **policies** in order to minimize conflicts with the County Planning Program.

3. Ensure that the location and design of new County buildings and grounds are consistent with the **goals, policies** and **programs** of the General Plan.

4.11.2 ***POLICIES***

1. The Planning Division will encourage Federal and State Agencies to fully comply with the County General Plan and other County adopted regulations, standards and land use **policies.**

2. Proposed County buildings and grounds in the unincorporated area of the County shall be consistent with the **goals, policies** and **programs** of the County General Plan.

4.11.3 ***PROGRAMS***

1. The County will continue to provide input on environmental documents for proposed modifications to Federal and State facilities to ensure all adverse consequences are adequately identified and mitigated as feasible.

2. The County will cooperatively work together with Federal and State Government Agencies to ensure that new expansions to existing State and Federal facilities or new facilities are compatible with the County General Plan and meet the needs of the County residents.

GLOSSARY

An attempt has been made to define all technical words contained in the text. If a technical word is not defined, often the word can be found in a standard dictionary. In using the glossary, the reader will note that many technical words appear within the definitions themselves. Definitions of these words can also be found in this glossary.

Active Fault: See **Fault.**

Air Pollution Control District (APCD): A County entity formed by the County Board of Supervisors in 1968. The APCD monitors air quality, works with business and industry in reducing emissions, forecasts future air quality, and is charged with enforcing the County's air quality regulations.

Airport: Any area of land or water which is used, or intended for use, for the landing and take-off of aircraft, and any appurtenant areas which are used, or intended for use, for airport buildings or other airport facilities or rights of way, and all airport buildings and facilities located thereon.

Alquist-Priolo Special Study Zones: Zones delineated by the California State Geologist to encompass potentially hazardous faults. The Alquist-Priolo Special Study Zones Act is intended to provide policies and criteria to assist local and state agencies in providing public safety in hazardous fault zones.

Archaeological Resources: The material remains (artifacts, structures, refuse, etc.) produced purposely or accidentally by human beings.

Attainment Area: An area which is shown by monitorial data or which is calculated by air quality modeling to be in compliance with any national ambient air quality standard.

Average Daily Traffic (ADT): The year-round daily average number of vehicle movements, combined for both directions, past a given point.

BEACON (Beach Erosion Authority for Control Operations and Nourishment): A joint powers agreement of cities and counties within the South Coast Littoral Cell (Santa Barbara and Ventura County Coast Area) created in 1986 to foster greater cooperation toward the maintenance and enhancement of coastal beaches.

Bikeway: Means all facilities that provide primarily for bicycle travel. The following categories of bikeways are defined in Section 2373 of the Streets and Highways Code:

- **Class I Bikeway (Bike Path or Bike Trail):** Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.

  Note: Mopeds are prohibited from bike paths and trails unless specifically authorized by the agency having jurisdiction over the facility.

- **Class II Bikeway (Bike Lane):** Provides a restricted right-of-way designated for the exclusive or semiexclusive use of bicycles with thorough travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.

  Note: Mopeds are permitted to operate in bike lanes, per CVC 21209.

- **Class III Bikeway (Bike Route):** Provides a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists.

Biological Resources: Includes plant and animal species and their habitats, plant communities and ecosystems.

Building Coverage: The ratio of the area of land covered by buildings to total lot area, expressed as percent coverage. For purposes of this definition, "building" is any structure having a roof supported by columns or walls, and "building area" is the area included within the surrounding exterior walls or columns of a building, exclusive of courts.

Candidate Species: Any species which is under consideration for a Federal designation by the Secretary of the Interior, but has not yet received that designation and is designated "candidate" by the U.S. Fish and Wildlife Service.

City Thoroughfare: A **thoroughfare** located within and maintained by a city.

Coastal Habitat: Environmentally sensitive habitat areas in the Coastal Zone which support plant or animal life, including coastal waters, intertidal areas, estuaries, lakes, wetlands and sand dunes.

Community Sewage Treatment Facilities: Plants that treat liquid waste that is received from off of the plant site. They include public agency and privately owned facilities. See **On-Site Wastewater Treatment Facilities.**

Conservation: The management of natural resources to prevent waste, destruction, or neglect.

County thoroughfare: A **thoroughfare** located within the unincorporated area and maintained by the County.

Cultural Resources: Is most frequently identified with prehistoric or historic items. These include prehistoric districts, sites, structures, artifacts and other evidence of human use considered to be of importance to a culture, subculture, or a community for traditional, religious, scientific or other reasons.

Dam: Any artificial barrier, together with appurtenant works, which impounds or may impound or divert water, and which either:

(a) is or will be 25 feet or more in height from the natural bed of the stream or watercourse at the downstream toe of the barrier, as determined by the State Department of Water Resources, or from the lowest elevation of the outside limit of the barrier, as determined by the State Department of Water Resources, if it is not across a stream channel or watercourse, to the maximum possible water storage elevation, or

(b) has or will have an impounding capacity of 50 acre-feet or more.

Dam Inundation: The flooding which occurs as the result of structural failure of a dam.

Dedication of Flowage Easement: An easement that is utilized to define an area subject to flooding and which allows an agency to inundate the land with flood water and prevent obstruction of flow.

Development: The subdivision of land; construction or alteration of structures, roads, utilities, and other facilities; installation of septic systems; grading activities; depositing of refuse; disposal of any material; dredging or mineral extraction, debris or fill materials; and the clearing of natural vegetation with the exception of agricultural activities. Routine repair and maintenance activities are not included.

Discretionary Development: Any development proposal, project or permit which requires the exercise of judgment, deliberation, or decision on the part of the decision-making authority in the process of approving or disapproving a particular activity, as distinguished from situations where the decision-making authority merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations.

Disposal Site: The location where any final abandonment, discard, or deposition of waste occurs.

Drilling Mud: A dense colloidal slurry or gel used in oil and gas drilling, and circulated through the well bore to facilitate the drilling process. Drilling mud is generally composed of bentonite clay, fresh water or saturated salt mixtures, and barite or naturally-occurring barium sulphate ore. Oil-based drilling muds are considered hazardous wastes because they usually contain heavy metals or other toxic substances.

Endangered Species: A species listed as Endangered by the State or U.S. Fish and Wildlife Service. Generally, any native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range other than a species of the Class Insecta determined by the Secretary of the Interior or Commerce to constitute a pest whose protection under the provisions of this Chapter 35 of Title 16 of the U.S. Code would present an overwhelming and overriding risk to man.

Environmentally Sensitive Biological Resource Area: Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Essential Facilities: Structures or buildings which must be safe and usable for emergency purposes after a natural or human-induced disaster in order to preserve the health and safety of the general public. Such facilities, as defined in the Uniform Building Code, are:

- Hospitals and other medical facilities having surgery or emergency treatment areas.
- Fire, police, and sheriff stations.
- Tanks or other structures containing, housing or supporting water or other fire-suppression materials or equipment required for protection of essential or **hazardous facilities** or **special occupancy structures.**
- Emergency vehicle shelters and garages.
- Structures and equipment in emergency-preparedness centers.
- Stand-by power generating equipment for essential facilities.
- Structures and equipment in government communication centers and other facilities required for emergency response.

(See **Special Occupancy Structure**)

Expansive Soils: Soils which expand or swell when wet and contract or shrink when dried.

Expressways: Roadways similar to freeways except that they do not have grade separated interchanges.

Extinct: Ceased to exist. No longer living.

Farmland of Local Importance: A category of the Important Farmlands Inventory. Generally includes lands of importance to the local agricultural economy, as determined by each County. Such lands support a crop which is crucial key to the local economy. This farmland is not irrigated and includes such dry land crops as beans or grain.

Farmland of Statewide Importance: A category of the Important Farmlands Inventory. Generally includes lands with a good combination of physical and chemical features for the production of agricultural crops. The criterion is basically like that of prime farmland but there is no minimum soil depth limitation and no permeability restriction. They have a broader water holding capacity and moderate erosion hazard.

Fault: A fracture in the earth's crust accompanied by displacement of one side of the fracture with respect to the other side.

- **Active Fault:** A fault that have moved recently and which is likely to move again. For planning purposes, "active fault" is usually defined as one that shows movement within the last 11,000 years and can be expected to move within the next 100 years.

- **Fault Hazard Area:** Land within 660 feet of active or potentially active faults will be treated as a fault hazard area until accepted geotechnical investigations indicate otherwise.

- **Fault Trace:** The line formed by the intersection of a fault with the earth's surface.

- **Inactive Fault:** A fault which shows no evidence of movement in recent geologic time and which has no potential for future movement in the currently known seismic setting.

- **Potentially Active Fault:** A fault known to have been active in the Pleistocene Period, but cannot be shown to be inactive in the Holocene Period, or a fault which, because it is judged to be still capable of ground rupture or shaking, poses an unacceptable risk for structures.

Federal Highway: A numbered federal route (i.e., U.S. 101 - Ventura Freeway).

Fire Break: A natural or artificial barrier where vegetation has been removed for fire control purposes.

Fire Hazard Area: An area where, due to slope, fuel, weather, or other fire-related conditions, the potential loss of life and property from fire necessitates special fire protection measures and planning before development occurs.

Fuel Break: A wide strip of land on which plants have been thinned, trimmed, or pruned, or have been changed to types which burn with lower intensity so that fires can be more easily extinguished.

Flood Plain: A plain bordering a river or stream subject to flooding. The flood plain is divided into two hazard areas:

- **Floodway:** The portion of the flood plain that carries the deep and fast-moving water (usually defined as the area needed to contain a 100-year storm flow).

- **Flood Fringe Area:** The remainder of the flood plain, subject to shallow, slow moving water.

Freeways: Roadways which primarily carry intercity and regional traffic via controlled access divided roads with grade separated interchanges and no access to adjacent properties.

Gas Scrubber Sludge: The liquid or slushy waste remaining after wet gas is put through a water or chemical wash to remove impurities and debris such as silt and clay. This waste can be considered hazardous because of sulphur and hydrocarbon content.

Goal: The ultimate purpose of an effort stated in a way that is general in nature.

Grazing Land: Lands on which the existing vegetation is suited to the grazing of livestock.

Greenbelt Agreement: A joint resolution between interested cities and/or the County to protect open space and agricultural lands and to reassure property owners located within these areas that lands will not be prematurely converted to agriculturally incompatible uses.

Ground Shaking Hazard Area: An area that can be expected to experience a ground shaking intensity during a maximum probable "design" earthquake.

Guidelines for Orderly Development: A policy document adopted by the County, cities and LAFCO. The intent of the Guidelines is to clarify the roles and responsibilities of the cities, the County and LAFCO regarding urban development within the Spheres of Influence of the various cities and Areas of Interest.

Habitable Building: A building suitable for living, sleeping, eating or cooking.

Hazardous Building: A substandard, unsafe or dangerous building as defined in the Uniform Code adopted by reference in the Ventura County Building Code.

Hazardous Facilities: Structures, as defined in the Uniform Building Code, for housing, supporting or containing sufficient quantities of toxic or explosive substances to be dangerous to the safety of the general public if released.

Hazardous Material: Any material that because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include hazardous substances, **hazardous waste**, and any material which a handler or the administration agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. (California Health and Safety section 25501.K). Such material may be classified as poisons, corrosive chemicals, flammable material, explosives and oxidizers and reactive materials or substances when tested in accordance with the criteria in California Administrative Code, Title 22, Article 3, Section 66261.20-66261.24.

Hazardous Waste: Any waste or combination of wastes, which because of its quantity, concentration, physical or chemical, or infectious characteristics, (a) may either cause or significantly contribute to serious illness or death or an increase in serious irreversible or incapacitating reversible, illness (Hazardous Waste Control Act Section 25117), or (b) may pose a substantial present or potential threat to human health or the environment when improperly managed. These substances may be poisons, corrosive chemicals, flammable materials, explosives and oxidizers and reactive materials or substances when tested in accordance with the criteria in California Administrative Code, Title 22, Article 3, Section 66261.20-66261.24.

Hazardous Waste Site: The location where hazardous waste is handled, stored, treated or disposed.

High Fire Hazard Areas: Certain areas in the unincorporated territory of the County classified by the County Fire Protection District and defined as any areas within 500 feet of uncultivated brush, grass, or forest-covered land wherein authorized representatives of said District deem a potential fire hazard to exist due to the presence of such flammable material.

Historical Resources: The material and nonmaterial expressions of human adaptations which characterized the post-contact or historic period. These resources include historic event or activity sites, historic archaeological sites, standing architecture and other significant properties and documents and other sources of historical information, objects of material culture, and secondarily, the more nonmaterial cultural qualities such as folklore, social organization, and value systems which are associated with these properties.

Inactive Fault: See **Fault.**

Incident: Any occurrence which causes the use of emergency resources.

Individual Sewage Disposal System [ISDS]: See **On Site Septic Systems.**

LAFCO (Local Agency Formation Commission): A local agency composed of City, County and at-large representatives established by State Laws to review and approve city incorporations, special district formations, annexations to and

detachment from local agencies, and any boundary changes involving local governments. The LAFCO must also establish a sphere of influence for cities and special districts.

Landslide/Mudslide Hazard Area: An area with a high potential for landsliding, such as old landslide deposits, very steep slopes, areas within or adjacent to fault zones, areas with adverse geological formations which are susceptible to failure and areas where the availability of water influences the strength of a potential failure surface by adding to the weight and increased pressure of the unstable mass.

Lanes (a.k.a. Road Cross Section): The number of through traffic lanes exclusive of merging and acceleration/deceleration lanes.

Leachate: Is substances, particularly contaminants such as fertilizer residues, industrial chemicals and landfill wastes, that percolate through soil by the action of a liquid, such as water.

Level(s) of Service (LOS): The traffic condition of a road/intersection based on a six step hierarchy outlined as follows:

LOS	Traffic Conditions
"A"	Free uninterrupted low volume flow at high speeds with no restriction on maneuverability (lane changing) and with little or no delays.
"B"	Stable flow with some restrictions to operating speed occurring.
"C"	Stable flow but with speed and maneuverability restricted by higher traffic volumes. Satisfactory operating speed for urban locations with some delays at signals.
"D"	Approaching unstable flow with tolerable operating speeds subject to considerable and sudden variation, little freedom to maneuver and with major delays at signals.
"E"	Unstable flow with volume at or near capacity, lower operating speeds and major delays and stoppages.
"F"	Forced flow operation with low speeds and stoppages for long periods due to downstream congestion. Volumes below capacity.

Liquefaction: A process by which water-saturated granular soils change from a solid to a liquid state, usually as a result of ground shaking.

Liquefaction Hazard Area: An area with a high potential for liquefaction; includes all alluvial deposits, particularly loose sandy soils and stream channel deposits, which have had water table levels within 15 feet of the ground surface at some time during the last fifty years.

Littoral Cell: A section of shoreline where the flow of sand begins at a major sediment source and terminates at a major sediment sink, such as a submarine canyon.

Locally Important Community: A plant or animal community which is considered by qualified biologists to be a quality example characteristic of or unique to the County or region.

Locally Important Species: A plant or animal species which is not an endangered, threatened or rare species, but which is considered by qualified biologists to be a quality example or unique species within the County or region. This term

includes any species which is under consideration for a designation of "endangered", "threatened" or "rare".

Local Park: Is a facility that provides recreation opportunities, including programmed activities and/or passive leisure facilities to serve the daily needs of a neighborhood or group of neighborhoods within an urban community.

Local Road Network: The road system in Ventura County consisting of the following roads:

- County-maintained local roads.
- City-maintained local roads.

Local Streets/Roads: Roads not depicted on the Public Facilities Map (Ventura County General Plan Goals, Policies and Programs - Figure 4). Most such roads are intended primarily to provide direct access to adjacent properties and do not convey substantial volumes of through traffic.

LOS: See **Level(s) of Service.**

Major Collectors: County or city thoroughfares that carry traffic between local streets/roads and arterials and have access to adjacent properties.

Mineral Resource Development: The exploration for or extraction of surface or subterranean compounds and materials; this includes oil and gas exploration and production, and the mining of metallic and nonmetallic minerals, sand, gravel and rock.

Mineral Resource Zones (MRZ's): The County's aggregate resources are classified by the State as one of several different mineral resource zone categories (MRZ-1, MRZ-2, MRZ-3, MRZ-3(a) and MRZ-4). These classifications are generally based upon the relative knowledge concerning the resource's presence and the quality of the material. The State-adopted definitions of each classification follow:

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone shall be applied where well developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that likelihood for occurrence of significant mineral deposits is nil or slight.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists. This zone shall be applied to known mineral deposits or where well developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.
- **MRZ-3:** Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- **MRZ-3(a):** Areas, judged on the basis of the limited available geologic data and field work, to have higher potential as sources of aggregate material suitable for Portland cement concrete than other deposits classified MRZ-3.
- **MRZ-4:** Areas where available information is inadequate for assignment to any other MRZ zone.

Mining: A form of mineral resource development involving the extraction and removal of more than 1,000 cubic yards of material from the same site, through such activities and uses as borrow areas, sand, gravel and rock quarries, etc. Mining does not include extraction and removal of material from construction sites or following floods, landslides or natural disasters where the land is being restored to its prior condition.

Minor Collectors: Roads which are similar to major collectors but do not function as thoroughfares (not shown on the Regional Road Network maps).

Noise Sensitive Use: Dwellings, schools, hospitals, nursing homes, churches and libraries.

Nonattainment Area: An area which is shown by monitorial data or which is calculated by air quality modeling to exceed any national ambient air quality standard.

Nonpoint Source Pollutants: Pollutants which wash off, run off, or seep from broad areas of land or water.

Notice of Hazards: A recorded notice filed with the County Recorder based upon a geologic and/or soil report, which identifies a known hazard located on a portion of the described property. This Notice of Hazard is recorded to protect potential buyers of real estate in areas of known natural hazards. Examples of natural hazards include: fault hazard, ground shaking, liquefaction, landslide/mudslide, subsidence, expansive soil, flood hazards and coastal wave hazards and erosion.

Off-Site Waste Treatment Facilities: Those facilities which accept wastes from outside their permit boundaries for treatment to change the physical, chemical or biological characteristics of the waste so as to render it less harmful to the quality of the waters of the State, safer to handle, easier to contain or manage, including use as a fuel, nutrient or soil amendment.

On-Site Septic Systems (Individual Sewage Disposal Systems [ISDS]): Those liquid waste systems which dispose of sewage generated by individual residences and businesses in unsewered areas. A conventional ISDS usually includes a septic tank and either a seepage pit or leach lines. Mound systems and subsurface sand filtration systems are two alternative ISDS which may be approved for use in areas where there are shallow soils over bedrock, high groundwater (either seasonal or permanent), or fractured bedrock. They are restricted for use only under specific conditions and guidelines in those areas of the County where community sewer systems are not available and on-site conditions preclude the use of conventional septic tank/soil absorption systems. Only domestic wastes (i.e., human waste from everyday living activities) can be discharged into a septic system.

On-Site Wastewater Treatment Facilities: Plants that treat liquid waste that is generated on the same project site where the plant is located, with both the plant and the project site under common ownership. These plants are sized to serve only the project site, and cannot serve uses off-site or under different ownership. See **Community Sewage Treatment Facilities.**

Open Space: Is any parcel or area of land or water which is essentially undeveloped for human use and devoted to an open-space use, such as the preservation of natural resources, managed production of resources, outdoor recreation, and preservation of public health and safety.

Paleontological Resources: The fossilized remains of ancient plants and animals.

Point Source Pollutants: Pollutants which enter the water from discernible, confined, and discrete conveyances (such as sewer pipes, culverts, tunnels, or other channels or conduits). These include seawater intrusion, agricultural erosion, septic tanks, and storm water runoff.

Policy: A specific statement guiding action and implying clear commitment.

Potentially Active Fault: See **Fault.**

Preservation: Use of long-term or permanent safeguards to guarantee the viability of natural or man-made resources.

Primary Arterials: County or city thoroughfares (usually six or more lanes-divided) primarily for the purpose of the movement of through traffic with limited access to abutting property.

Prime Farmlands: A category of the Important Farmlands Inventory. Generally includes land with the best combination of physical and chemical characteristics for the production of crops. Prime farmlands are irrigated soils over 40 inches deep with a water holding capacity of four inches or more. They are generally well drained, free from frequent flooding, and have very slow sub-soil permeability or freezing soil temperature.

Program: A coordinated set of measures to carry out goals and policies.

Protected Resource: Is a mapped designation that appears on the Resource Protection Map and serves to identify areas of the County which contain resources identified in the Resources Chapter as needing special regulatory measures.

Rare Species: A species listed as Rare by the State. Generally any species that exists in such small numbers, or is so limited geographically, or that is unable to displace other species in competition, or is under protection or management programs, such that it may be endangered if its habitat was reduced or significantly altered.

Red Line Channels: Channels over which the Flood Control District exercises regulatory jurisdiction.

Regional Recreation Area: An extent of land which, by its unique natural character or unusual or extensive development, offers recreation opportunities that attract visitors from beyond the local vicinity without regard to physical, political or municipal boundaries.

Regional Road Network: The road system in Ventura County consisting of the following roads:

- Federal highways
- State highways
- County thoroughfares
- City thoroughfares

Regulatory Flood (Selected Flood): The magnitude of the flood selected by a governmental agency for planning purposes.

Release of Hazardous Material: Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of a hazardous material.

Renewable Energy (Source): Energy sources which are not depleted by use and are available as natural flows of energy and materials in the environment, e.g. solar, wind, falling water, plant matter, and by-products of human activities.

Renewable Resources: Self-perpetuating types of resources; living or biotic resources. Also, resources that are in finite quantity but can be reused, such as air and water. Other renewable natural resources include: solar, wind, biomass, and water resources.

Reservoir: Any receptacle which contains or will contain the water impounded by a dam.

Resource Protection Map: The policy map of the Goals, Policies and Programs Resources Chapter (Figure 1), that delineates Mineral Resource Areas, Scenic Resource Areas and Scenic Highway Areas.

Road Cross Section: See **Lanes.**

Selected Flood: See **Regulatory Flood.**

Scenic Highway Area: The viewshed corridor one-half mile on both sides of a state or County designated scenic highway as shown on the Goals, Policies and Programs Resource Protection Map (Figure 1).

Scenic Resource Area: 1) Scenic resource areas are areas as may be identified by an area plan; and 2) The area encompassing lakes and the viewshed extending from the lakes to the highest ridgeline surrounding the lakes. The County lakes included are: Lake Casitas, Lake Matilija, Lake Piru, and Lake Sherwood. Scenic Resource Areas are depicted on the Resource Protection Map (Figure 1).

Scenic Route: A street, drive, road, highway, or freeway deemed scenic.

Secondary Arterials: County or city thoroughfares (usually four lanes-divided) that connect other arterials and major collectors for the purpose of through traffic with some access to commercial/industrial developments but generally restricted access to residential areas.

Seiche (saysh): A wave which oscillates in an enclosed or partially enclosed body of water.

Seiche Hazard Area: An area surrounding all of existing reservoirs and lakes up to an elevation of ten feet above the normal water level.

Service Level: See **Levels of Service.**

Sewage Treatment Facilities: Facilities which collect water used for domestic, commercial and industrial purposes, treat it to remove organic and inorganic waste materials, and discharge the treated effluent to the environment. (See **Community Sewage Treatment Facilities and On-Site Wastewater Treatment Facilities**).

Shoreline Protective Devices: Seawalls, revetments, breakwaters, and other such construction that alters shoreline processes.

Site: One or more lots planned and developed as a unit under one permit.

Soils Capability Classes: Classification of the suitability of soils are designated by Roman numerals I through VIII. The numerals include progressively greater limitations and narrower choices for practical use. The groups are made according to the limitations of soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment.

- **Class I Soils:** Have few limitations that restrict their use.
- **Class II Soils:** Have some limitations that reduce the choice of plants or require moderate conservation practices.

Solid Waste Disposal Sites: Are those facilities for the final deposition of wastes onto land. Wastes are categorized into four general types: Class I (Hazardous), Class II (Designated Wastes), Class III (Municipal) and inert waste.

Special Occupancy Structure: A category of structures as defined in the Uniform Building Code. They are:

- Covered structures whose primary occupancy is public assembly with a capacity of more than 300 persons.
- Buildings for schools through secondary or day-care center with a capacity of more than 250 students.
- Buildings for colleges or adult education schools with a capacity for more than 500 students.
- Medical facilities with 50 or more resident incapacitated patients; but not including hospitals and other medical facilities having surgery and emergency treatment areas, which are **Essential Facilities.**

- Structures and equipment in power generating stations and other public utility facilities that are not identified as **Essential Facilities**, and required for continued operation.
- Jails and detention facilities.
- All structures with an occupancy of more than 5,000 persons.

(See **Essential Facilities**)

State Highway: A numbered state route.

Subsidence: Any settling or sinking of the ground surface arising from surface or subsurface causes.

Surface Mining and Reclamation Act of 1975 (SMARA): The State Legislature in 1975 enacted this act to ensure the proper reclamation of surface mining operations and to safeguard access to mineral resources of regional and statewide significance in the face of competing land uses and urban expansion.

Tank Bottoms: Clay and other solids that separate out of well fluid components. These solids contain mineral salts, organic compounds, and a fraction of dense, oil-based compounds.

Thoroughfare: A road that is either a primary arterial, a secondary arterial or a major collector and is depicted on the Public Facilities Map (Ventura County General Plan Goals, Policies and Program - Figure 4).

Threatened Species: A species listed as Threatened by the State or U.S. Fish and Wildlife Services. Generally, any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Tsunami (tsoo naa' me): A traveling ocean wave of extremely long length and period, generated by disturbances associated with earthquakes, volcanoes or major submarine landslides.

Unique Biological Resources: A biotic resource whose presence is unusual and of special interest due to extremities of range, special soil types, or unusual associations with other species.

Unique Farmlands: A category of the Important Farmlands Inventory. Generally includes lands of lesser quality soils used for the production of the State's leading agricultural cash crops. It has the special combination of soil quality, location, growing, season, and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods.

Viewshed: The area within view from a defined observation point.

Waste Site: The location where waste is stored, collected, processed, reused, converted or disposed.

Waste Transfer Stations: Those facilities utilized to receive wastes from outside their permit boundaries to temporarily store and/or separate wastes, or transfer the solid wastes directly from smaller to larger vehicles for transport.

Water Reclamation: The recycling or reuse of either treatment plant effluent (wastewater) or industrial process water.

Wetland Habitats: Plant communities which are associated with **wetlands.**

Wetlands: Lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is periodically covered with shallow water. The frequency of occurrence of water is sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.

Wetlands include marshes, bogs, sloughs, vernal pools, wet meadows, river and stream overflows, mudflats, ponds, springs and seeps.

Wildlife (Migration) Corridor: Linear spaces that connect the various areas of an animal's habitat, and serve as links between feeding, watering, resting and breeding places. These corridors are especially important to larger, wider-ranging animal species.

Williamson Act: A California Statute which allows local government to enter into long-term contracts with agricultural landowners by lowering property taxes as an incentive to continue agricultural use of the land. Also known as the California Land Conservation Act of 1965.

ventura county general plan



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public facilities and services appendix

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES AND SERVICES APPENDIX

1988

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VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES & SERVICES APPENDIX

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4. PUBLIC FACILITIES AND SERVICES APPENDIX

4.1 INTRODUCTION

County government is concerned with providing many necessary public facilities and services at both a local and a regional level.

As growth throughout Ventura County occurs, a need is created for the expansion of public facilities and services. Funding for these have been more difficult to obtain since passage of Propositions 4 and 13. These initiatives have altered traditional public facilities and services financing mechanisms. As a result, more emphasis has been placed upon the utilization of fiscal impact studies which assist local officials in determining whether a particular project or scale of development in the community will generate sufficient revenues to defray the necessary public facility and service costs. Now, more than ever, the availability of public facilities and services is an important consideration in determining the economic feasibility of new development.

The Public Facilities and Services Appendix addresses ten types of public facilities and services directly related to physical development of the County: Transportation/Circulation (Roads and Highways, Transit, Rail Service, Airports, Harbors, and Pipelines), Water Supply, Waste Disposal Facilities, Utilities, Flood Control and Drainage, Law Enforcement and Emergency Services, Fire Protection, Education, Parks and Recreation, plus Other Public Buildings and Grounds. In some instances, facilities and services are owned and/or operated by the County of Ventura, or may be provided by an agency governed by the Board of Supervisors. In other cases, facilities and services are owned and operated by independent governmental entities or private companies.

The intent of this Appendix is to assess the current status of each of the aforementioned public facilities and services and to evaluate the abilities of service-providing agencies to accommodate projected growth. Because of their high costs and lasting impacts, provision of public facilities and services has become an issue of major importance. Careful planning for public facilities and services is needed to avoid uncontrolled growth and to ensure efficient use of scarce public funds. The network of publicly-owned facilities, such as roads, streets, water and sewer facilities, public buildings, and parks, form the infrastructure of Ventura County. While capital facilities are built to accommodate present and anticipated needs, some play a major role in determining the location, intensity, and timing of future development.

The Public Facilities and Services Appendix provides the background information and analysis necessary to establish the **goals**, **policies** and **programs** which are part of the Public Facilities and Services Chapter of the Ventura County General Plan, with the overall goal of providing those necessary facilities and services to the residents of Ventura County.

The words shown in **bold face** within this Appendix are defined in the Goals, Policies and Programs Glossary (separate document).

4.2 TRANSPORTATION/CIRCULATION

The Government Code (Sec. 65302(b)) requires that a general plan contain a circulation "element" consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use "element" of the General Plan. The Transportation/Circulation Section describes the Roads and Highways, Transit, Rail Service, Airport, Harbor and Pipeline (including oil and natural gas) facilities in Ventura County.

4.2.1 ROADS AND HIGHWAYS

The Roads and Highways section addresses the **thoroughfare** requirements of the general plan by examining the existing and proposed **Regional Road Network** for the unincorporated area of the County.

4.2.1.1 Existing Regional Road Network

The 1986 Regional Road Network map (Figure 4.2.1 - separate map) depicts existing **freeways/expressways, conventional state highways, primary** and **secondary arterials** and **major collectors. Minor collectors** and **local streets/roads** are not shown because the myriad of small streets would be unreadable on the map and because such non-thoroughfares (by definition) are not required by the Government Code to be depicted. Information regarding the regional road network in the unincorporated portion of the County includes number of **lanes** (a.k.a., **road cross sections**) and **average daily traffic** (ADT). Within the ten incorporated cities in the County, major city streets and all conventional state highways are depicted on the map for locational purposes only, without reference to number of lanes or ADTs.

The cross section and ADT information for the County arterials and major collectors shown on the 1986 map were derived from the Ventura County Public Works Agency's April, 1986 Road Index-Inventory. The cross section information for the freeways/expressways was provided by the California Department of Transportation (CALTRANS) to the County in 1987 and the ADTs are from CALTRANS 1986 Traffic Volumes Report.

The number of lanes and ADT on a given road are two variables that contribute to an understanding of that road's general traffic condition. The traffic condition is referred to as **Level of Service** (LOS). LOSs are based on the following six step hierarchy:

LOS	Traffic Conditions
"A"	Free uninterrupted low volume flow at high speeds with no restriction on maneuverability (lane changing) and with little or no delays.
"B"	Stable flow with some restrictions to operating speed occurring.
"C"	Stable flow but with speed and maneuverability restricted by higher traffic volumes. Satisfactory operating speed for urban locations with some delays at signals.
"D"	Approaching unstable flow with tolerable operating speeds subject to considerable and sudden variation, little freedom to maneuver and with major delays at signals.
"E"	Unstable flow with volume at or near capacity, lower operating speeds and major delays and stoppages.
"F"	Forced flow operation with low speeds and stoppages for long periods due to congestion. Volumes below capacity.

County thoroughfares and conventional **State highways** in the unincorporated area are classified as Class I, II, or III roadways. Class I roadways are rural two-lane or multi-lane roads of essentially level terrain, where the road section has been improved to meet current road standard criteria; Class II roadways are rural two-lane roads, of essentially level and slightly rolling terrain, where the road section does not meet current road standard criteria; and Class III roadways are rural two-lane roads, of mountainous terrain or sharply curving alignment, where the road section does not meet current road standard criteria;

The ADT and LOS thresholds for Class I, II and III roadways and Federal and State freeways are shown on Figure 4.2.2.

4.2.1.2 2010 Regional Road Network

The projected County **Regional Road Network** for the year 2010 is depicted on the 2010 Regional Road Network Map (Figure 4.2.3). The information shown on the map was developed from the Ventura County Area TransportationStudy (VCATS). VCATS was prepared by the Southern California Association of Governments (SCAG) in cooperation with the Ventura County Public Works Agency (PWA), the County Planning Division, and CALTRANS.

The methodology employed in preparing VCATS involved the collection of population, dwelling unit and employment forecasts by geographic subareas. The geographical sub-areas that were selected were based on the County's existing Growth Area/Non-Growth Area division of the County. The County is divided into 31 such sub-areas (see Land Use Appendix). These sub-areas are also used by the County for population and dwelling unit projections that are used in the Air Quality Management Plan, Water Quality Management Plan, and Spheres of Influence Plan.

The study base year of 1984 was selected because that year represented the most accurate data available at the time VCATS was initiated. The 1984 data included social (population and dwellings) and economic (employment and income) information. The data, by sub-areas, was used by SCAG as a technical data base for the VCATS project. SCAG used the Urban Transportation System (UTPS) and the TRANPLAN computer models to estimate the year 2010 socioeconomic indicators and to project the County road network with ADTs, for the year 2010.

Socioeconomic indicators were developed by the County and SCAG for each of the sub-areas. The table below shows examples of Countywide socioeconomic indicator input data (1984) and projections for the year 2010.

Indicator	1984	2010
Total County Population	578,905	893,770
Single family dwelling units	118,910	266,424
Total all dwelling units	197,954	349,143
Percent single family dwelling units	60.1%	76.1%
Average population per dwelling unit	2.92	2.56
Average dwelling units per acre	0.17	0.30
Total work force population	249,118	481,157
Total jobs within County	200,203	378,821
Percent of total jobs in retail	17.8%	16.5%

Similar tables for each of the 31 sub-areas are contained within the VCATS document and the Land Use Appendix.

The methodology employed to obtain the 2010 Regional Road Network map used the 1984 and the projected 2010 socioeconomic data as well as other variables such as road type (e.g., limited access freeway, County roads cross sections, etc.), locations (e.g., downtown, rural, etc.), bus lines (e.g., routes, operating speeds, headways, etc.), and roadway improvements made since 1984 and pending (now funded) improvements. This information was used in various computer gravity models (e.g. SCAG Regional Transportation Model, CALTRANS' LARTS model and UTPS) to predict trip generation and distribution information that resulted in the 2010 Regional Road Network map.

The estimation of the number of lanes needed in 2010 for all County **thoroughfares** and **Federal and State highways, expressways** and **freeways** in the unincorporated area of the County is based upon projected ADT at LOS "D". However, no road widening is indicated on State Route 33, between Casitas Springs and the City of Ojai, pursuant to long-term objections to road improvements expressed by some Ojai Valley residents due to their concerns that such improvements would foster unwanted growth in the area.

The 2010 Regional Road Network map uses the same graphic format as the 1986 Regional Road Network map. The 2010 map shows the projected **ADT's**

and lanes necessary for existing and future roads to accommodate the projected ADT's. Projected ADT's are shown for all freeways/ expressways, as well as for County arterials and major collectors. Also depicted on the 2010 map are existing and proposed major city streets and State highways as obtained from the respective city's long range street plans. However, as on the 1986 map, ADTs and cross sections are not indicated for streets nor Federal or State highways within a city's boundary.

The 2010 map also depicts the areas that each city might annex in the future by indicating a city's Sphere of Influence (the probable ultimate boundary of each city). Within each city Sphere, the city's proposed major streets (as depicted on their respective street plans) are also shown.

The 2010 Regional Road Network includes a proposed State Route 1 Bypass which generally runs east of the City of Oxnard along the existing Rice Avenue alignment. While the State is still reviewing a Project Study Report for this facility, the freeway is included due to high projected traffic volumes (VCATS, 1987). The extension of this freeway north of U.S. 101 (eventually connecting to the existing Simi Valley Freeway in Moorpark) is not shown on the 2010 Regional Road Network due to very low traffic volumes projected for 2010. However, it may be prudent to avoid development which would adversely affect the CALTRANS adopted alignment in order not to preclude CALTRANS' future ability to construct this freeway at a future date when traffic studies warrant it (after 2010).

4.2.1.3 Modes of Transportation

Modes of transportation utilizing the County Regional Road Network vary considerably from the predominate automobile to trucks carrying commodities and goods, bus transit, and bicycles. Bicycles don't utilize the same travel lanes, but use part of the same right-of-way.

Automobile: The automobile remains the most popular form of transportation in Ventura County. The California Department of Motor Vehicles reports that 358,563 fee paid automobiles were currently registered in Ventura County as of December 31, 1986. During that same year there were 426,900 licensed drivers. The resulting ratio of licensed drivers to fee paid automobiles is 1.19. This ratio indicates that the population, in general, relies heavily on the use of the automobiles for transportation.

Trucks: According to Public Works Agency Transportation Department estimates, approximately 10% of all vehicle trips are trucks.

Bus Transit: For a complete discussion of bus transit in Ventura County, refer to Section 4.2.2 (Transit Service).

Bicycles: The bicycle is a realistic and viable alternative to the automobile. Its use can improve air quality and vehicle congestion, and it can make significant reductions in vehicles' noise pollution, fuel consumption and parking needs. The bicycle can be a commute mode by itself or be used as a feeder to mass transit operations.

Bikeways are one element of an effort to improve bicycling safety and convenience, either to help accommodate motor vehicle and bicycle traffic on shared roadways, or to complement the road system to meet needs not adequately met by roads. The "General Road Design Policies" portion of the County of Ventura Public Works Agency Road Standards states that "turning lanes at intersections and bicycle lanes may require Right-of-Way and improvement widths greater than those shown on the B series plates."

Due to high road construction costs, only a few County roads where either parking is prohibited in each direction or the right-of-way width is increased, actually contain bicycle lanes. **Class II bicycle lanes** (paved area within road for preferential use by bicycles) require an additional ten feet of right-of-way and pavement (i.e., five feet in each direction).

An alternative would be to maintain and improve the width and quality of the surface of the right hand portion of existing roads so they are suitable for bicycle traffic (**Class III bicycle route**).

Bicycle and pedestrian improvement projects in Ventura County are regularly funded by VCAG's Executive Committee with TDA Article 3 allocations of SB 821 money. Countywide bicycle plans are developed to the extent possible by cooperative effort between County and cities staffs in order to coordinate planning and funding. For example, the County is working with the cities of Ojai and Ventura to construct the Ojai Valley Trail, described below. The County also worked with the cities of Oxnard and Ventura to construct a bicycle bridge over the Santa Clara River, which connects with the Harbor Boulevard Bike Lane between Oxnard and Ventura.

Description of County Bicycle Facilities:

- Victoria Bikeway: This was constructed in the mid-1970's. A **Class I path** parallels Victoria Avenue from Olivas Park Drive to Gonzales Road and a Class II bike lane is available for bicyclists from Gonzales Road to Channel Islands Boulevard.

- Harbor Boulevard Bike Lane: This Class II coastal facility has been striped along Harbor Boulevard based on the availability of local funding. As a link between projects in Oxnard and Ventura, the County constructed a bicycle bridge over the Santa Clara River to provide safe travel between the two cities.

- Ojai Valley Trail: This is a 9.5-mile by 50-foot multi-purpose Class I trail utilizing the abandoned Southern Pacific Railroad right-of-way from the City of Ojai to Foster Park. A split-rail fence separates the horses from the pedestrians and bicyclists. One side of the trail is paved with asphalt for bicyclists, and the other with wood chips and gravel, a more suitable roadbed for horses. Currently, about 4.2 miles of the Ojai Trail have been completed.

4.2.2 TRANSIT SERVICE

In Ventura County, there are several public and private bus transit operators. These are described below.

- The South Coast Area Transit (SCAT) serves Ojai, Ventura, Oxnard, Santa Paula, Port Hueneme and much of the unincorporated area in between. Buses run seven days a week (excluding some holidays).

- The County, along with the Cities of Camarillo and Thousand Oaks, contracts for the Interconnect Bus to serve Westlake Village, Thousand Oaks, Camarillo, Oxnard, and Ventura. Interconnect operates weekdays, via peak-hour express and regular midday runs. The bus meets the Southern California Rapid Transit District bus in Westlake for inter-county trips to Los Angeles County. The County also contracts for transit service in the unincorporated communities of Oak Park, El Rio and Nyeland Acres.

- Fillmore Area Transit Company (FATCO) provides weekday bus service to Fillmore, Santa Paula, Ventura and Piru. FATCO provides this service under a contract with the County and City of Fillmore. FATCO also operates the Fillmore City dial-a-ride.

- Camarillo Bus Service serves the intracity bus needs of the City of Camarillo. The City also contracts with the County and the City of Thousand Oaks for "Interconnect" bus service.

- The Simi Valley Transit System operates in Simi Valley, Chatsworth and Moorpark. The Moorpark College route connects with the Thousand Oaks Transit System.

- The Thousand Oaks Transit System serves Thousand Oaks, Newbury Park and Westlake Village. Also, the City of Thousand Oaks works with the County and Camarillo to fund the intercity "Interconnect" bus.

- Greyhound Bus Lines provides regular long distance travel service and stops at seven cities in the County: Camarillo, Fillmore, Oxnard, Santa Paula, Simi Valley, Thousand Oaks and Ventura, plus Piru and Point Mugu.

- An airport bus service company, Great American Stagelines, makes trips to Los Angeles International Airport and occasionally to Burbank. Intercity bus service is also provided by Great American Stagelines to Ventura, Oxnard, Camarillo, Thousand Oaks, Westlake and Woodland Hills.

- All ten incorporated cities and all major Ventura County communities have a program to transport senior citizens to meal sites and the delivery of meals to seniors, known as Meals on Wheels. This program is administered by Public Social Services Agency with a subcontract to each local community.

- The Senior Survivalmobile serves senior citizens countywide during medical emergencies, with the help of volunteers and their cars. This program is also administered by Public Social Services Agency.

- Taxicab companies are available in all cities except Fillmore, Moorpark and Ojai.

- Commuter Transportation Services (aka Commuter Computer), a regional ride-sharing and marketing agency, arranges inter-county and local carpools, van pools and bus pools. Riders can park their cars free all day at ten park and ride lots located in Camarillo, Simi Valley, Thousand Oaks and Ventura.

The County Public Works Agency Transportation Department has been designated by the Board of Supervisors as the County department responsible for transit planning, coordination and project implementation.

To accomplish this goal, the County staff regularly works with other County departments, VCAG and SCAG, the other area transit operators, and local, State and Federal agencies.

The County assists whenever needed in coordination of services and institutional arrangements and is also responsible for funding a number of different operations. In FY 1986/87, as has happened in past years, the County assigned TDA funds to SCAT for service to the unincorporated communities in its areas. One-third of the costs for the regular and express Thousand Oaks/Camarillo/Ventura Interconnect Bus were paid with a County TDA Article 8c allocation. Also funded were contract services in the Fillmore/Piru area, and between the community of El Rio and the City of Oxnard. Other recipients of County funds were Commuter Computer, which got an operations grant of FAU money in support of a full-time Ventura office, and the numerous public social service agency operations in the area which were funded through a variety of sources.

4.2.3 RAILWAY SERVICE

County Railway Service includes passenger rail service on Amtrak and freight rail service by Southern Pacific and the Ventura County Railway Company.

4.2.3.1 Passenger Service

Amtrak passenger rail service has served Oxnard for many years and began serving Simi Valley in October 1986. Amtrak passes through the Oxnard and Simi Valley stations daily, with one run going north and the other south. The Coast Starlight northbound train leaves Simi Valley and Oxnard late morning. The southbound leaves Oxnard and Simi Valley in the early evening. Nationwide connections may be made in Los Angeles. Amtrak bus

service is available to Los Angeles Union Station from Ventura, Oxnard and Simi Valley. Expansion of service along the Santa Barbara to Los Angeles route is expected soon.

4.2.3.2 Freight Service

The Southern Pacific Transportation Company provides intra-state and trans-continental rail freight service from its main coast line which runs from the Santa Barbara County line along the coast south through Ventura to Oxnard and then east through Camarillo, Moorpark, Simi Valley to the Los Angeles County line for a distance of 48.9 miles. A 28.6 mile branch line travels along the Santa Clara River Valley from Montalvo in a northeasterly direction through Santa Paula and Fillmore to Piru.

The Ventura County Railway Company is a local railroad connecting the Southern Pacific tracks with the U.S. Naval Construction Battalion Center, Port Hueneme Harbor and industrial parks in Oxnard, south of Fifth Street. The Ventura County Railway Company maintains 11.8 miles of route miles and about 18 track miles. The Railway Company began in 1905 as the Bakersfield and Ventura Railway but was renamed in 1911 as the Ventura County Railway Company when the proposed extension to Bakersfield was dropped. The present railroad with 15 employees has its headquarters at 250 East Fifth Street in Oxnard.

The Ventura County Railway Company transports a variety of freight including industrial, agricultural, chemical, government related, and automobiles and small trucks for the Mazda Motors of America's port facility in Port Hueneme. One Ventura County Railway track crosses Fifth Street and splits into two interchange tracks at the west end of the Southern Pacific yard. Near the Ventura County Railway office, the shortline's track divides, with one heading south a couple of blocks to the enginehouse/diesel shop. The other track goes southeast to a small yard. A number of industries, such as a chemical company, tire dealers, a fertilizer company and vegetable packing plants are located in this area, known as Oxnard Industrial Plaza. Beyond the yard, a wye is located near Wooley Road.

From the wye one track heads south, crossing California Highway 1 (Pacific Coast Highway). Known as the South Oxnard Branch, this line runs 5.4 miles to the South Oxnard Industrial Area and to the docks at Port Hueneme. Along the way, the track passes Donlon and Round Mountain Junction. Just south of the junction, near Arnold, the Diamond Spur and Edison Branch curve left off the South Oxnard Branch. These two lines and their sidings serve the South Oxnard Industrial Area. The South Oxnard Branch curves westward, enters the city of Port Hueneme, and terminates at the Oxnard Harbor District's Port of Hueneme South Terminal. Customers in the industrial area include oil companies, lumber yards, offshore oil drilling supply companies, vegetable packing plants and the Kaiser Aluminum plant. The Edison Branch continues to Southern California Edison's Ormond Beach power plant. The power plant receives very little rail traffic.

Back at the wye in downtown Oxnard, the other track (the Patterson Branch), heads west for Wilds, 3.5 miles away. The track runs alongside Wooley Road (and down the center median for 1.4 miles) to Patterson Junction. At this point the track curves south 90° and heads south alongside Patterson Road. Patterson Junction once had a track continuing west and then north to beet dumps. As the present branch continues southward it enters Port Hueneme and then comes to Wilds (named after W. N. Wilds, a longtime Ventura County Railway employee in the 1940s), once the site of a sugar beet dump. The only thing to mark the location today is the boundary of the Navy base. From that point on, the Navy owns the trackage. The base, officially known as the U.S. Naval Construction Battalion Center, has a small yard just inside the fence and the Ventura County Railway Company occasionally drops off cars loaded with Navy trucks, bulldozers and related construction equipment and materials. U.S. Navy GE center cab 80-tonner 65-00349 switches the Navy-related parts of the base. The Ventura County Railway switches several civilian companies on the base. Civilian and military business coexists on the base because

it's the only deep-water seaport between San Francisco Bay and the Long Beach/Los Angeles ports. Among the customers on the base serviced by the Ventura County Railway is the Mazda Motors of America port facility. Mazda Motors is one of the railway's largest sources of revenue.

4.2.4 AIRPORT FACILITIES

There are four airports in Ventura County, which include County owned and operated airports at Camarillo and Oxnard, a private airport at Santa Paula and the Federally operated Point Mugu Naval Air Station and runway at San Nicholas. The California Air National Guard has an operation on a 208 acre site adjacent to Pt. Mugu NAS. A description of each airport and the County Airport Administration follows (Refer to Figure 4.2.4 for the location of each airport):

4.2.4.1 County Airports

County Department of Airports was created in December 1984 by the Board of Supervisors, independent from the former Property Administration Agency. The Department of Airports oversees the development, operations, repair and maintenance to airports in Camarillo and Oxnard.

The Aviation Advisory Commission was established by the Board of Supervisors for the purpose of advising the Board on airport policy related matters. Airport authorities were established under the provisions of a Joint Powers Agreement between the County of Ventura and the City of Camarillo for the Camarillo Airport and a separate Airport Authority at Oxnard between the County and City of Oxnard.

- Oxnard Airport: The Oxnard Airport is a 212 acre facility located in Oxnard and, although within the corporate boundaries of Oxnard, is operated by the County of Ventura.

  The Oxnard Airport airside facilities include a single east/west runway (Runway 7/25), 5,950' long and 100' wide with an effective gradient of 0.19 percent. The runway is asphalt in composition and is rated with a gross loading weight strength of 30,000 lbs for aircraft with single wheel landing gear configurations, and 53,000 lbs for aircraft with dual wheel configurations. Due to a 137 foot church spire located east of the Airport, the Runway 25 landing threshold has been displaced 1,382 feet to the west. This reduces the Runway 25 landing length to 4,568 feet. It is also important to note that the primary approach path for the instrumented runway at Oxnard Airport is located directly above the Oxnard Civic Center. A parallel taxiway is available the full length of the runway and is connected to the runway by five connecting taxiways. Runway 25 is also equipped with a high speed taxiway exit.

  A total of three major hangars, one medium hangar, and 123 small hangars (52 County owned and 71 private) are located at the airport. Aircraft storage space at the Airport consists of 56,100 square feet of hangar space, which will accommodate approximately 100 aircraft. In addition, 140 outdoor tie-down positions are available. The four story, 80' high air control tower, built in 1960, is operated by FAA Air Traffic Controllers from 7 a.m. to 9 p.m.; of the 24-hour period the airport is open.

  Excellent air navigation aids are available to guide pilots approaching the Oxnard Airport during poor weather conditions. Four published instrument procedures are available for the airport. The most precise of these is the Instrument Landing System (ILS) approach procedure to Runway 25 which allows a qualified pilot to descend solely by reference to instruments to 250 feet above the ground in visibilities as low as three-quarters of a mile. In addition, there are two non-precision Very High Frequency Omni Range (VOR) approaches, one to Runway 7 and the other to Runway 25, and a published Standard Instrument Departure (SID) profile.

Facilities at the Oxnard Airport consist of the passenger terminal building and paved automobile parking for 350 passenger vehicles and ten employee vehicles. Access to the terminal building is provided by West Fifth Street, a two-lane paved road. In addition, limited access is provided by Patterson Road. The terminal building itself is a modern structure consisting of approximately 10,000 square feet of usable space. Other facilities include maintenance shop, generator building, restrooms, warehouse, residence and sheds.

There are an estimated 140,000 annual aircraft operations at the Oxnard Airport, 90% for general aviation activities, 5% combined air taxi and commuter, and the remaining 5% used by helicopters. Oxnard Airport is served by three regional air carriers, which offer 18 daily flights to such market areas as Los Angeles, Sacramento and Santa Barbara.

- Camarillo Airport: The Camarillo Airport, owned and operated by the County of Ventura, was formerly known as the Oxnard Air Force Base. It is located three miles southwest of the center of the City of Camarillo and lies within the city limits. The city is 45 miles northwest of Los Angeles and 379 miles south of San Francisco and borders the Ventura Freeway (Highway 101). Camarillo lies within the Oxnard Plain approximately eight miles northeast of the Pacific coastline.

  The Camarillo Airport encompasses 753 acres within both City and County jurisdictions. Although the airport lies within the city limits, the airport is owned and operated by the County. The portion of the east/west runway (Runway 8/26) which is being used for general aviation aircraft, is 6,020 feet long by 150 feet wide. Presently, the runway is served by a non-precision circling Very High Frequency Omni Range (VOR) instrument approach to the airport, which allows a pilot to descend to a decision height of 641 feet above ground level (AGL) in instrument meteorological conditions before making a circling approach to the runway. The new FAA control tower began operation at the airport in 1991. The FAA's ten employees operate the facility for 14 hours each day.

  Facilities at the Camarillo Airport consist of a small (4,000 square foot) administration building, and adjacent public parking for approximately 50 automobiles. A total of four large hangars, six medium and 292 small hangars (122 County owned and 170 private) are located at the airport. Numerous former Air Force structures still exist at Camarillo Airport and are now being used for various uses (Refer to Section 4.11.3.2 for a discussion of County facilities at Camarillo Airport). Access to the airport is provided by the Ventura Freeway (Highway 101) to Las Posas Road (four lane/paved) and Pleasant Valley Road (two lane/paved).

  For 1990, there were an estimated total of 222,000 annual aircraft operations at the Camarillo Airport, 93% for general aviation activities, 4% were Air Taxi operations, and the remaining 3% were helicopter activities.

4.2.4.2 Federal Airports

- Naval Air Weapons Station Point Mugu: The 4,500 acre Naval Air Weapons Station (NAWS) and Warfare Center Weapons Division Headquarters (NAWCWPNS) is located at the western end of the agricultural lands of the Oxnard Plain, six miles southeast of Oxnard and 7-1/2 miles southwest of Camarillo. The Ventura County and Point Mugu Game preserves (private clubs not associated with the Navy) are located to the northwest of the base with the Camarillo State Hospital 4 miles northeast. The base is flanked by the Santa Monica Mountains on the east and the Pacific Ocean to the south.

  The facility was originally developed during World War II as an extension of the base at Port Hueneme and the early operations were those associated with the training of Seabee personnel.

From 1946 to the present, the mission and the facilities at Point Mugu rapidly expanded. In 1948, Congress appropriated funds for land acquisition and military construction. In 1949, the Naval Air Station (NAS) was commissioned. The steel planking of Runway 09/27 was upgraded and in 1953, Runway 03/21 was built. Sand was pumped into the surrounding marshes to accommodate the construction of new buildings, hangars, shops, offices, and laboratories. By 1958, the Naval Air Missile Test Center became the Pacific Missile Range with a growth of from 612 employees in 1946 to 4,800 employees. In 1992, the role of NAWCWPNS Point Mugu in the local economy was substantial. Approximately 2,700 military personnel are assigned to Point Mugu. Total military and civilian employment, including contractors, is approximately 9,000. Expenditures resulting from the operation of Point Mugu are approximately $262,000,000 annually.

NAWS Point Mugu falls under the command structure of NAWCWPNS, but is a separate command with its own charter. NAWS Point Mugu has been assigned the following functions:

- serve as an "all weather" air station,
- provide search and rescue services,
- maintain and operate an air terminal,
- provide radar approach/departure control services for the Oxnard Plain area,
- maintain and operate Outlying Field San Nicolas Island,
- perform services in support of the NAWCWPNS,
- provide administrative and military control of naval facilities at Channel Islands, and
- provide operational, logistic, and administrative support to tenants and assigned activities.

The primary mission of NAWCWPNS at Point Mugu is to perform development test and evaluation; development support and follow-on engineering; logistics and training support for naval weapons, weapons systems and related devices; and associated activities. NAWCWPNS Point Mugu also maintains facilities away from the main station including facilities at the Camarillo Airport, the Port Hueneme Naval Complex, Laguna Peak, and the off-shore islands of San Nicolas (10,000' runway), Santa Cruz, San Miguel, and Santa Rosa. NAWCWPNS Point Mugu also maintains a 30,000-square-mile air/sea missile test range.

In performance of their missions, Navy Units at Point Mugu require many varied and different types of aircraft. The on-base military aircraft fleet generally consists of approximately 120 aircraft. Several of these aircraft are associated with reserve squadrons.

The primary N/S runway 03/21 measures 11,100' x 200' and is utilized basically by the fixed wing military aircraft. The shorter E/W runway, 09/27 measuring 5,500' x 200', is used by light planes, helicopters and air club planes. However, either runway can be used by any type of aircraft as the use of the runway varies with wind, weather, demand and other factors. Aircraft operations at Point Mugu are directly proportional to the levels of missile testing and requirements for pilot training which occur at the facility. Point Mugu maintains an air traffic control center which controls all aircraft in southern Ventura County. A military approach control facility and control tower provides service seven days a week.

The number of aircraft operations at Point Mugu is in excess of 200,000 per year. Hours of operation of the airfield are normally between 6 a.m. and 10 p.m. daily and closed on holidays. In reality, however, utilization of the airfield is very low in the early morning and evening hours. The peak days of activity at Point Mugu usually occur on Wednesdays or Thursdays, whereas the least active day is Sunday. Peak hours vary from day to day, depending on changing mission requirements.

- Channel Islands Air National Guard Base: The 146 Tactical Airlift Wing officially dedicated a new 208 acre installation September 1990. This property is north of Pt. Mugu NAWS and is at the intersection of Hueneme and Navalair Roads.

  This California Air National Guard Wing relocated their C-130 aircraft from Van Nuys Airport beginning in 1989. Daily operational control and management is focused out of the State of California, Office of the Adjutant General with fiscal and liaison management being focused from the National Guard Bureau (Air) in Washington D.C. A technical force of 286 civilians, 25 contract employees, and 52 active duty personnel ensure weekday operations meet expected standards. The unit uses the Pt. Mugu NAWS runway via a connecting 2,500 foot taxiway annexation for aircraft operations. Expected normal operations average 30 operations per day between 8:00 a.m. and 10:00 p.m. Monday through Friday, with an additional five return flights on weekends.

  Operations increase when this unit is tasked for Fire Support Missions in conjunction with the U.S. Forest Service or The California Department of Forestry. The mission of this unit is to train assigned units military war skills totalling over 1,500 personnel during Unit Training Assemblies held once a month and various two week active duty assignments. The Wing is an operational unit under the Air Force Air Mobility Command (AMC).

4.2.4.3 Private Airports and Landing Strips

The privately owned Santa Paula Airport is located within the city limits, south of State Highway 126. The airport is owned by the Santa Paula Airport Association, Ltd. and is operated by the owners (stockholders). Currently there are several airport related businesses located at the Santa Paula Airport including the Santa Paula Flight Center which provides parts, supplies, instruction, fuel and maintenance, the airport cafe plus additional aircraft related businesses.

Airport facilities include an asphalt paved runway 04/22, 2650' x 45'. There are 119 hangars with 88 tie-downs. Virtually all of the estimated 52,400 annual aircraft operations at the airport involve general aviation aircraft. There is no tower, thus limiting hours of operation to daytime only. Helicopters also operate out of this facility.

Finally, there are a few privately owned and operated landing strips scattered throughout the County.

4.2.5 HARBORS

The Port of Hueneme is located entirely within the City of Port Hueneme. Serving as California's only deepwater port between Los Angeles and San Francisco, the Port of Hueneme's area of influence extends far into the southwestern United States and Western Canada.

The port is administered by the Oxnard Harbor District, which has jurisdiction over approximately 70 acres of onshore area and ten acres of waterway; the remainder of the harbor is under U.S. Navy jurisdiction.

The Oxnard Harbor District was formed for the purpose of the development of a harbor at the Port of Hueneme and the subsequent improvement and operation of that harbor. The District is empowered by its authorizing statute and by the California Harbors and Navigation Code (Sections 6000 et seq.) to acquire, construct, own, operate, control, or develop any and all harbor works or facilities within the limits of its established boundaries. This district is governed by five elected harbor commissioners. The Oxnard Harbor District Board of Harbor Commissioners' primary goal continues to be the attraction of ocean cargo business. To the extent that the development of the ocean freight business will not be inhibited, the Board of Harbor Commissioners' goal has been to maximize revenue and create additional employment by encouraging the utilization of

From 1946 to the present, the mission and the facilities at Point Mugu rapidly expanded. In 1948, Congress appropriated funds for land acquisition and military construction. In 1949, the Naval Air Station (NAS) was commissioned. The steel planking of Runway 09/27 was upgraded and in 1953, Runway 03/21 was built. Sand was pumped into the surrounding marshes to accommodate the construction of new buildings, hangars, shops, offices, and laboratories. By 1958, the Naval Air Missile Test Center became the Pacific Missile Range with a growth of from 612 employees in 1946 to 4,800 employees. In 1992, the role of NAWCWPNS Point Mugu in the local economy was substantial. Approximately 2,700 military personnel are assigned to Point Mugu. Total military and civilian employment, including contractors, is approximately 9,000. Expenditures resulting from the operation of Point Mugu are approximately $262,000,000 annually.

NAWS Point Mugu falls under the command structure of NAWCWPNS, but is a separate command with its own charter. NAWS Point Mugu has been assigned the following functions:

- serve as an "all weather" air station,
- provide search and rescue services,
- maintain and operate an air terminal,
- provide radar approach/departure control services for the Oxnard Plain area,
- maintain and operate Outlying Field San Nicolas Island,
- perform services in support of the NAWCWPNS,
- provide administrative and military control of naval facilities at Channel Islands, and
- provide operational, logistic, and administrative support to tenants and assigned activities.

The primary mission of NAWCWPNS at Point Mugu is to perform development test and evaluation; development support and follow-on engineering; logistics and training support for naval weapons, weapons systems and related devices; and associated activities. NAWCWPNS Point Mugu also maintains facilities away from the main station including facilities at the Camarillo Airport, the Port Hueneme Naval Complex, Laguna Peak, and the off-shore islands of San Nicolas (10,000' runway), Santa Cruz, San Miguel, and Santa Rosa. NAWCWPNS Point Mugu also maintains a 30,000-square-mile air/sea missile test range.

In performance of their missions, Navy Units at Point Mugu require many varied and different types of aircraft. The on-base military aircraft fleet generally consists of approximately 120 aircraft. Several of these aircraft are associated with reserve squadrons.

The primary N/S runway 03/21 measures 11,100' x 200' and is utilized basically by the fixed wing military aircraft. The shorter E/W runway, 09/27 measuring 5,500' x 200', is used by light planes, helicopters and air club planes. However, either runway can be used by any type of aircraft as the use of the runway varies with wind, weather, demand and other factors. Aircraft operations at Point Mugu are directly proportional to the levels of missile testing and requirements for pilot training which occur at the facility. Point Mugu maintains an air traffic control center which controls all aircraft in southern Ventura County. A military approach control facility and control tower provides service seven days a week.

The number of aircraft operations at Point Mugu is in excess of 200,000 per year. Hours of operation of the airfield are normally between 6 a.m. and 10 p.m. daily and closed on holidays. In reality, however, utilization of the airfield is very low in the early morning and evening hours. The peak days of activity at Point Mugu usually occur on Wednesdays or Thursdays, whereas the least active day is Sunday. Peak hours vary from day to day, depending on changing mission requirements.

- Channel Islands Air National Guard Base: The 146 Tactical Airlift Wing officially dedicated a new 208 acre installation September 1990. This property is north of Pt. Mugu NAWS and is at the intersection of Hueneme and Navalair Roads.

  This California Air National Guard Wing relocated their C-130 aircraft from Van Nuys Airport beginning in 1989. Daily operational control and management is focused out of the State of California, Office of the Adjutant General with fiscal and liaison management being focused from the National Guard Bureau (Air) in Washington D.C. A technical force of 286 civilians, 25 contract employees, and 52 active duty personnel ensure weekday operations meet expected standards. The unit uses the Pt. Mugu NAWS runway via a connecting 2,500 foot taxiway annexation for aircraft operations. Expected normal operations average 30 operations per day between 8:00 a.m. and 10:00 p.m. Monday through Friday, with an additional five return flights on weekends.

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the Port of Hueneme facilities by the offshore oil industry and from other activities in which the District may legally engage.

The District's current operations involve only the ownership and operation of the commercial portion of the Port of Hueneme which consists of about one-third of the total Port of Hueneme complex. The balance is owned and operated by the U.S. Navy. The District is not connected in any way with the two marinas in Ventura County (Channel Islands Harbor and Ventura Harbor) which are under separate governing bodies.

The Port was constructed in 1938 onshore from Hueneme (submarine) Canyon. Tidal currents and flushing action keep the depth of the harbor relatively constant. The harbor is man made, and connected to the open sea by a jetty protected entrance channel. The outer part of the entrance channel terminates at the head of a submarine canyon which offers an excellent deepwater approach. Only occasional dredging is needed to maintain harbor depths ranging from 35 to 32 feet.

The uses of the existing ten acre water area within the Harbor is divided into four categories:

- Deep draft berths: The primary deep draft berths at the Port are three at Wharf 1 and two at Wharf 2. The water depth at MLLW (Mean Lower Level Water) is a minimum of 35' at berths of Wharf 1 and 32' MLLW at Wharf 2.

- Shallow draft moorings: Although the Port has no shallow berths as such, moorings are provided at the east end of the east-west channel for commercial and sport fishing boats.

- Turning basin: The central water area within the Port is a turning basin capable of maneuvering ships up to 900 feet in length. This area is not used for any other purpose.

- Entrance channel: The entrance channel is approximately 400 feet wide, with a navigable channel in the center about 300 feet wide. The channel provides a short run for vessels entering the harbor from the coastal shipping lanes or the open sea. The Channel Entrance Wharf can moor medium draft vessels.

The Port has six wharfs. Wharf 1 (South Terminal), is 1,800 feet long and Wharf 2 (North Terminal), is 1,400 feet long. They are used for cargo transfer, tanker lightering, and servicing oil supply vessels. Through a sharing agreement with the U.S. Navy, Wharves 3 through 6 may be used by commercial vessels if the commercial wharves are full. There are slips for commercial fishing vessels and sportfishing vessels. Offshore oil platform supply vessels generally dock alongside Wharf 1 or Wharf 2.

The Port of Hueneme handles a variety of commodities in addition to offshore oil and gas supplies. These include automobiles, bananas, citrus and fresh fruit, cannery fish, livestock, lumber, fuel, wood pulp, water, pipe, and other general cargo. The tonnage shipped through the port has increased steadily since 1971, when additional dredging operations allowed access of deeper draft ships. (Port dredged from 32' Mean Lower Level Water (MLLW) to 35' MLLW in 1975).

The Oxnard Harbor District was authorized by the U.S. Congress in 1983 to acquire approximately 18 acres of land and about 650 feet of wharf directly across from the commercial pier (Wharf 1). The wharf was constructed on land acquired by the Navy through condemnation at the beginning of World War II (1942). The expanded facilities, including modern terminal facilities, will increase port capacity both in terms of vessels and cargo tonnage. For example, Mercedes Benz and BMW started importing automobiles in 1988. The acquisition and expansion of the port will increase its cargo throughput capacity from 420,000 tons to over 800,000 tons.

The main vehicular access to the harbor area from Highway 101 is via Las Posas Road/Hueneme Road at this time and will be via the Rice Road bypass

at some time in the future. Established truck routes exist on Harbor Boulevard and Victoria Avenue, Channel Islands Boulevard and Ventura Road. The Pacific Coast Highway (State Route 1) via Hueneme Road provides additional circulation to and from the south.

The Port of Hueneme is served by the Ventura County Railway Company with both northern and southern access. The northern line extends through the U.S. Naval Construction Battalion Center and provides rail service to Wharf 2. The southern line enters the Port of Hueneme from the east along an alignment south of Hueneme Road.

4.2.6 PIPELINES

Major pipelines within Ventura County carry crude oil and natural gas, generally along highways and railroad lines. The major crude oil and natural gas pipelines traversing Ventura County are owned by ARCO, Chevron, Mobil, Shell, Texaco and Union Oil. Most oil companies which have operations in Ventura County have pipelines located within their oil/gas lease areas, but do not operate major transporting pipelines. Four Corners Pipeline Company, a subsidiary of ARCO, is a private pipeline company regulated by the Public Utilities Commission that transports crude oil through their own lines and connects to other pipelines as needed. Four Corners Pipeline Company operates only their own pipeline facilities, and does not own any crude oil. There is also an existing Southern California Edison fuel line originating within the Oxnard Harbor District which connects to the Ormond Beach Generating Station. Refer to Figure 4.2.5 for a map showing Energy Pipelines and Storage Facilities.

4.2.7 CONCLUSIONS

While the existing County Regional Road Network is generally adequate to meet present travel demands, Ventura County is confronted with the potential for significant population growth by the year 2010. This projected increase in population will place a major strain on the County's Regional Road Network. To meet this challenge, the Goals, Policies and Programs of the General Plan must address means of moving people and goods in the most efficient and cost effective manner possible, including expansion of the existing road network, encouraging alternate transportation modes (ridesharing, bicycling, transit, etc.), and disbursing peak traffic demand to better utilize the existing road network.

The Goals, Policies and Programs of the General Plan also encourages continued land use compatibility around existing airport facilities. To evaluate the total circulation system, it is important to also consider all forms of transport including pipelines which move oil and gas through fixed systems. The General Plan Goals, Policies, and Programs provide the basis for improving the circulation and transportation network in Ventura County in a complementary manner with the Land Use Portion of the General Plan.

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Val Hartley - Shell
Walter Hernandez - State Fire Marshall's Office
Steve Van Winkel - Union Oil
Wayne H. Waterman - Texaco

FIGURE 4.2.2

AVERAGE DAILY TRAFFIC (ADT)
LEVEL OF SERVICE (LOS) THRESHOLDS
COUNTY ROADS AND CONVENTIONAL STATE HIGHWAYS

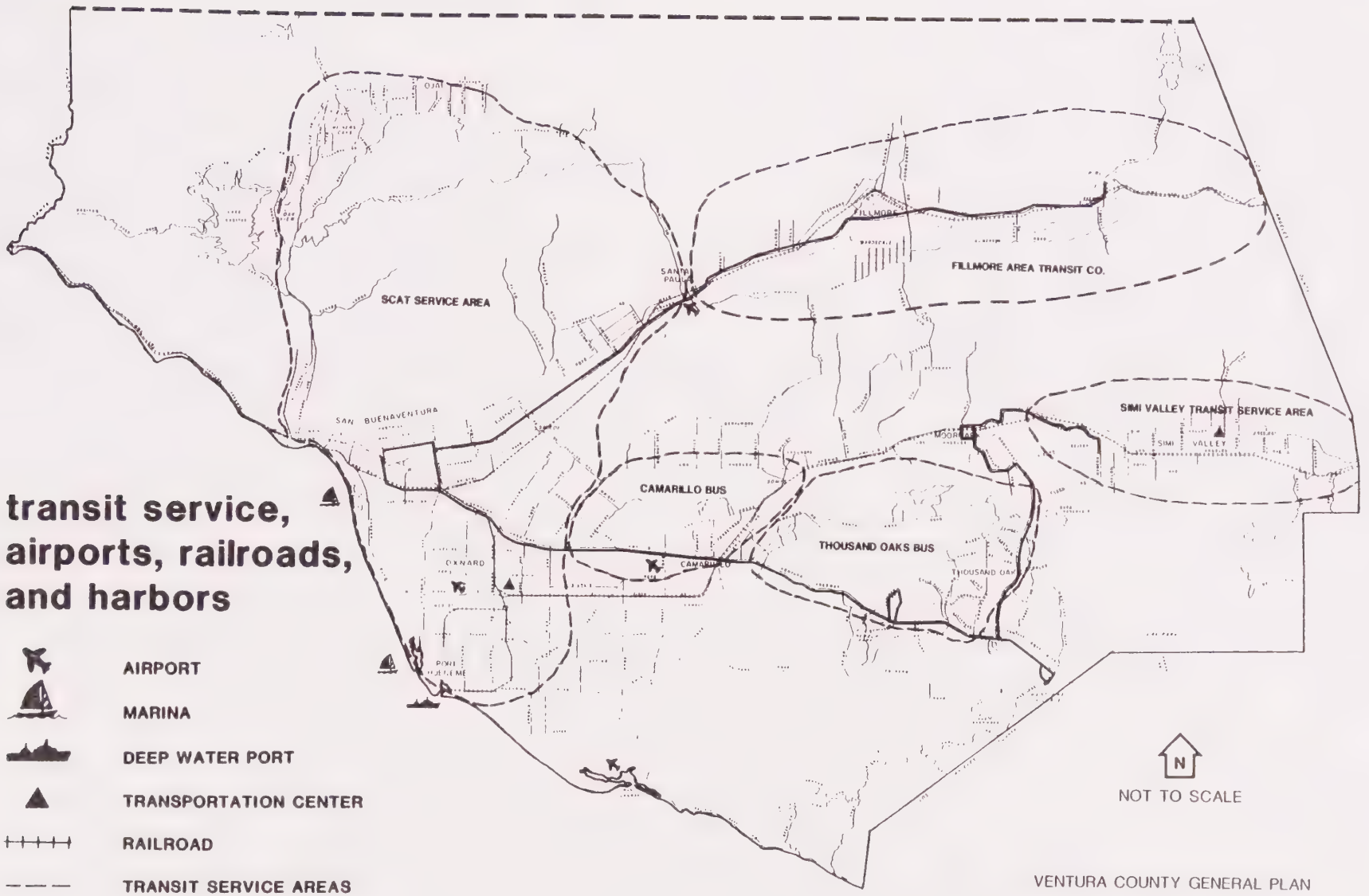
	CLASS I			CLASS II	CLASS III
LOS	2 LANES	4 LANES	6 LANES	2 LANES	2 LANES
A	2,400	19,000	29,000	1,500	350
B	5,600	28,000	42,000	3,900	2,000
C	10,000	38,000	57,000	7,000	3,300
D	16,000	47,000	70,000	11,000	5,900
E	27,000	58,000	87,000	21,000	16,000

ADT/LOS THRESHOLDS
FREEWAYS

LOS	4 LANES	6 LANES	8 LANES	10 LANES
A	31,000	46,000	62,000	77,000
B	48,000	71,000	95,000	119,000
C	68,000	102,000	136,000	169,000
D	82,000	123,000	164,000	205,000
E	88,000	132,000	176,000	220,000

SOURCE: VENTURA COUNTY PUBLIC WORKS AGENCY 9/94

R. 12/20/94



transit service, airports, railroads, and harbors

- AIRPORT
- MARINA
- DEEP WATER PORT
- TRANSPORTATION CENTER
- RAILROAD
- TRANSIT SERVICE AREAS
- INTERCONNECTING BUS ROUTE

SOURCE: VENTURA COUNTY PLANNING DIVISION
DATE: SEPTEMBER 1987

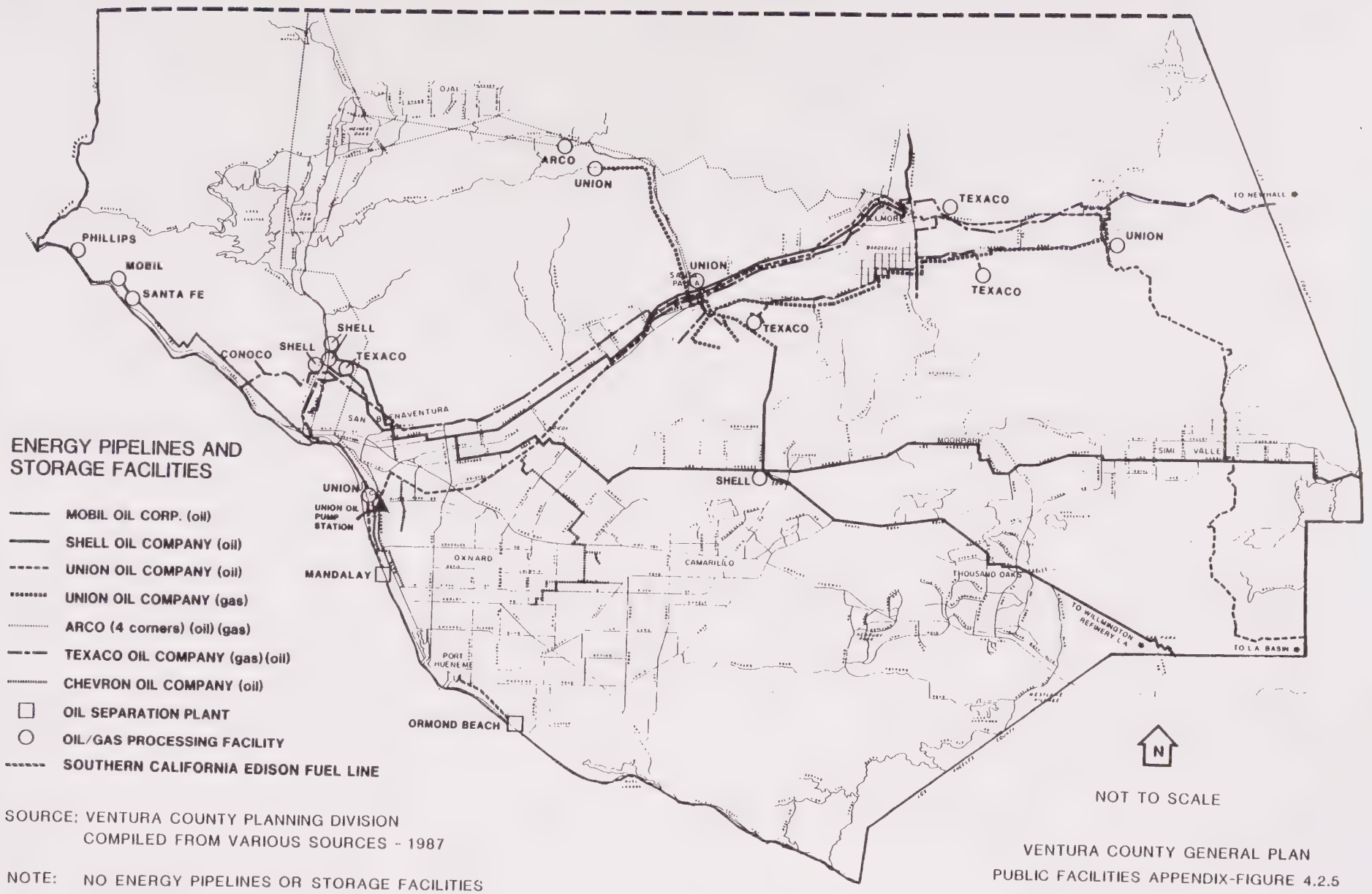
NOTE: NO TRANSIT SERVICE, PUBLIC AIRPORTS, RAILROADS OR HARBORS EXIST IN THE NORTH HALF.

NOTE: AIRPORT ON SAN NICHOLAS ISLAND

NOT TO SCALE

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.2.4



SOURCE: VENTURA COUNTY PLANNING DIVISION
COMPILED FROM VARIOUS SOURCES - 1987

NOTE: NO ENERGY PIPELINES OR STORAGE FACILITIES IN THE NORTH HALF

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX-FIGURE 4.2.5

4.3 WATER SUPPLY FACILITIES

This section focuses on the supply, storage and delivery of water to consumers. An important companion text to the following is the Water Resources Section in the Resources Appendix. That section addresses the quality and quantity of ground, surface and reclaimed water that is available within the County.

4.3.1 WATER SOURCES

Ventura County's water supply is obtained from three major sources: groundwater (67%), surface water (11%), and imported water (22%). A small amount of reclaimed water (less than ½%) also is used.

4.3.1.1 Groundwater

Groundwater is the single most important source of water; as of 1991 it provides about 67% of the water utilized in the County. Agricultural demand accounts for an estimated 86% of the total demand for groundwater in the County. Of the total water demand in 1991, 285,100 acre feet (AF) came from local groundwater sources. Because it is estimated that the local groundwater basins can safely supply only about 242,000 AF countywide, water users are extracting at least 43,000 AF more than is being naturally and artificially replenished. Groundwater is pumped extensively by individual well owners and purveyors. Purveyors either wholesale water to other purveyors or make deliveries directly to individual users. Since more groundwater is used than is replaced, overall, the County's groundwater reserves are slowly decreasing.

The County's groundwater supply is contained within five major aquifers. The aquifers are the Oxnard, Mugu, Hueneme, Fox Canyon, and Grimes Canyon. Both the Oxnard aquifer in the Oxnard Plain area and the Fox Canyon aquifer are being overdrafted. This overdrafting of the local water supply has caused a number of problems, most notably seawater intrusion in the Upper Aquifer system of the Oxnard Plain. Projects are currently underway to remedy the seawater intrusion problem caused by overdraft in the Oxnard Aquifer Zone, such as the new Vern Freeman Diversion and the Pumping Trough Pipeline (see below).

4.3.1.2 Surface Water

Surface water resources in Ventura County are divided into two major hydrologic units (the Ventura River and Santa Clara-Calleguas Units) and into four other smaller hydrologic units (Rincon Creek, Cuyama, San Joaquin, and the Malibu Hydrologic Units). Refer to Figure 4.3.1 for a map of the major surface water sources in Ventura County.

Surface water is taken from Lake Casitas, Lake Piru and diversions from the Santa Clara and Ventura Rivers. As of 1985, it provided approximately 11% of the total water utilized in Ventura County. The primary source of surface water, Lake Casitas, is maintained by the Casitas Municipal Water District, which engages in both retail and wholesale sales of the lake's water. The Casitas Municipal Water District wholesales water to retailers for municipal, industrial, and agricultural uses within the Ojai Valley and the City of Ventura. The District also retails water directly to some users in the Ojai Valley and the North Coast of the County. Santa Clara River water is diverted by the United Water Conservation District to spreading grounds where it recharges the groundwater basin. The United Water Conservation District operates and maintains Lake Piru, the Freeman Diversion, and associated spreading grounds along the Santa Clara River. The District diverts Santa Clara River water to replenish the groundwater and to a number of water agencies on the Oxnard Plain. Several water purveyors and individuals also use some Santa Clara River water.

Ventura River water is diverted by the City of Ventura for use in the City's system. Some water is diverted from the Santa Clara and Ventura Rivers by individuals.

4.3.1.3 Imported Water

Imported water is obtained by Calleguas Municipal Water District (CMWD) from the Metropolitan Water District of Southern California (MWD) for delivery to purveyors in the southern and eastern portions of the county which includes the Cities of Thousand Oaks, Simi Valley, Moorpark, Camarillo and Oxnard. Since 1985, imported water, which is State Project water, amounts to about 22% of the water utilized in the county. The Casitas MWD, United WCD, and the City of Ventura have jointly studied the feasibility of constructing various types of distribution facilities to import additional State Project water, to which they collectively hold a yearly entitlement of 20,000 acre feet. Studies to obtain additional State Project Water are continuing, including analysis of the appropriate institutional and financial arrangements. United WCD ordered their portion of the entitlement (5,000 AF/Y) to be delivered from Pyramid Lake via Piru Creek to United's Lake Piru Reservoir. However, due to California Department of Water Resources (DWR) cutbacks, United MWD received only 1,500 AF during 1991.

4.3.2 WATER USERS/SUPPLIERS

Figure 4.3.3 shows water demands in Ventura County.

As of 1990, there were more than 178 water purveyors in Ventura County, which include six city systems, eight privately owned companies, four other public water purveyors, 20 special water districts, and more than 100 mutual water companies and other public and private systems of varying sizes (Navy bases, Navy housing, mobilehome parks, etc.). Refer to Figure 4.3.4 for a list of water purveyors in Ventura County and Figure 4.3.5 for a map of major water wholesalers. It is estimated there are about 2,000 individual well owners who obtain their own water directly. Of the groundwater pumped in Ventura County, less than one third is delivered by a water system. Most of the groundwater pumping in Ventura County is done by individual well owners.

Figure 4.3.6 summarizes the Ventura County water districts that serve incorporated cities and unincorporated urban areas.

4.3.2.1 Agricultural Water

Ventura County obtains, as of April 1990, approximately 86% of the water required for agricultural uses from its groundwater. The remaining 14% is obtained from surface water (Lake Casitas and Santa Clara River), imported water and reclaimed water. The ratio of groundwater used relative to other sources is expected to decline somewhat by the year 2010 due to the decline in agricultural demand on groundwater by individual farmers, coupled with the likelihood that those water purveyors providing surface water to agricultural users will continue to do so. The availability and use of imported water for agriculture will depend on its cost and the policy of purveying agencies.

Most local farmers obtain their water from their own wells. Their cost for water is based on energy use, annual maintenance costs, and in some areas extraction charges assessed by United WCD and the Fox Canyon Groundwater Management Agency.

Demand from the agricultural sector is decreasing. Countywide demand for agricultural use is forecasted to decline by about 35,000 acre feet by the year 2010. As most of the County's agricultural demands are met by groundwater, and since overall surface supplies will actually increase due to the Pumping Trough Pipeline and Freeman Diversion projects, the decline in groundwater extraction for agriculture may be as high as 40,000 acre feet. To the extent reclaimed water is developed for irrigation use, this decrease will be even greater.

The major geographic areas of agricultural water use are discussed below:

- Oxnard Plain: At present, Oxnard Plain agricultural users obtain the majority of their water from one of the five aquifers that

underlie the Oxnard Plain. However, there is a County Ordinance restricting drilling any new Oxnard Aquifer zone wells which could aggravate seawater intrusion. Some surface water is also obtained from the Santa Clara River by the United WCD and distributed by the Pleasant Valley County Water District and other agricultural systems to individual irrigators.

Over time, agricultural water demand on the Oxnard Plain is expected to decrease, due to the urbanization of prime agricultural land. In addition, availability of surface water supplies to meet agricultural demands is expected to increase, due to the construction of the Pumping Trough Pipeline Project and the improved Vern Freeman Diversion Project (Figure 4.3.2). This delivery system was constructed to deal with the County's severe seawater intrusion problem; it was designed to deliver an additional 12,000 acre feet (or more) annually of Santa Clara River water and Lower Aquifer System groundwater, to farmers who are currently using groundwater from the intruded Upper Aquifer System.

There is considerable potential for use of reclaimed water on the Oxnard Plain. The availability of such water for agriculture would dramatically decrease the amount of water needed from the County's groundwater system in the 1990's. The County has applied for a low-interest State loan of five million dollars to deliver reclaimed water from Thousand Oaks' Hill Canyon Waste Treatment Plant into the Pleasant Valley County Water District's distribution system (Figure 4.3.2).

- Santa Clara River Valley: The Santa Clara Valley's agricultural community depends primarily on groundwater for its water supply, although a small amount of surface water is diverted annually from the Piru Creek and Santa Clara River. It is anticipated there will be some loss of agricultural land in the area due to urbanization. By the year 2010 the major source of water for agriculture will continue to be groundwater. Overall the reduction in demand from agriculture on the groundwater systems will be offset by an increase in groundwater demand by urban users. In effect, total use of Santa Clara Valley's groundwater supply is expected to remain approximately constant for the remainder of the century.

- Conejo-Calleguas Basin: This area includes that portion of Ventura County served by the Calleguas Municipal Water District with the exception of the City of Oxnard. In general, most of the agricultural land in this area lies in its western portions around the Las Posas Valley, the Santa Rosa Valley, Moorpark, and adjacent areas. The Conejo-Calleguas area depends to a great extent on imported water for much of its agricultural uses.

  Potential demand for additional reclamation, especially in the Las Posas area, is very high. The North Las Posas Basin is being overdrafted by 12,000 acre feet/year (1991). By 2000, this overdraft is expected to increase to 14,600 acre feet/year due to increasing agricultural pumping. Fox Canyon Groundwater Management studies indicate that this overdraft will increase to even a greater amount to 17,800 AF/year by the year 2010.

- Ojai Valley: Agricultural water users in the Ojai Valley obtain their water from two major sources, Lake Casitas and groundwater. One or two small systems depend on naturally occurring springs. In addition to the local Ojai Valley demand on Lake Casitas supplies, agricultural users along the north coast of Ventura County also obtain their water from Lake Casitas, as do several major oil companies who use Lake Casitas water to extract oil.

  The Casitas Municipal Water District provides water from Lake Casitas at both the wholesale and retail levels for urban and agricultural use. The Casitas MWD is near to supplying the "safe yield" of the Lake on a regular basis.

Agricultural water demand is expected to decline as irrigated agricultural acreage is supplanted by urban development. However, the Casitas MWD estimates that up to approximately 3,000 additional acres could come under irrigation by the year 2000. Were this to occur, insufficient water would be available to meet demand. Casitas MWD, the City of Ventura and the United Water Conservation District are studying the feasibility of importing State Project Water, to which they hold an entitlement of 20,000 AF/year. Importation of water would enable Casitas MWD to meet the maximum expected demand.

- North Coast: The North Coast area of Ventura County has no significant local groundwater. Water is supplied by Casitas MWD. Most of the water delivered is used by farmers who have established avocado orchards in the area. The total water use in Zone 9 (Rincon) for fiscal year 1986-87 was 3,066 acre-feet, of which 2,678 acre-feet were used for agriculture. Casitas MWD has 514 residential and 12 industrial services in this area.

4.3.2.2 Municipal and Industrial Water Use

In 1985, Ventura County obtains slightly less than one-third of the water used for municipal and industrial (M & I) uses from its groundwater. The remaining two-thirds is obtained primarily from imported supplies (State Water Project) and from surface water (primarily Lake Casitas). This ratio is expected to continue for the remainder of the century, although the demand for groundwater is expected to increase more slowly than demands on surface and imported water sources.

Overall, M & I water use is expected to increase from a total of 136,000 AF in 1991 to 174,000 AF in the year 2000 to a total of about 197,000 AF for 2010. Countywide, however, total extractions from the groundwater can be expected to decline only slightly, with the decreasing agricultural use being largely offset by increasing M & I use.

Information on municipal and industrial water use has been collected at various times by the County of Ventura. This data base was most recently updated in April, 1987. Per capita water use is estimated based on information from the 16 largest water purveyors in the County. Information has been assembled for each major urban area in the County; results appear in Figures 4.3.7 and 4.3.8. As can be seen, some areas of the County have experienced gradual increases in per capita water use over time, others decreased and some areas have fluctuated from year to year. Overall, current per capita water use is slightly higher in 1986 than in 1983.

The annual average per-capita water use rate countywide in 1986 was 0.209 acre feet (af) which is approximately 68,000 gallons per person per year. The daily per-capita rate was 186 gallons. The annual per-capita rate includes not only that water used by residents in their homes, but a proportionate share of water consumed by industries, businesses and public agencies which indirectly benefits those residents. The 1986 per-capita rate decreased by 0.004 AF from 1985 when the per-capita rate countywide was 0 .206 AF. Five cities (Camarillo, Fillmore, Oxnard, Port Hueneme and Ventura) had a decrease in per-capita consumption, while two areas in the County had an increase in per-capita usage (Thousand Oaks and Oak Park). The remaining cities' (Moorpark, Ojai, Santa Paula and Simi Valley) per-capita rates did not change.

Forecasts of municipal and industrial water use is based on the following geographic areas:

- Oxnard Plain: On the Oxnard Plain, M & I users obtain most of their water from the Calleguas Municipal Water District (imported water) and the United Water Conservation District (groundwater from the El Rio pumping station). A relatively small amount of M & I water is obtained directly by water agencies and individuals operating their own wells. Although Port Hueneme and the City of Oxnard maintain wells drilled into the Oxnard Plain Aquifers, they are used only in

emergency situations. Total M & I demand on the Oxnard Plain is expected to increase significantly.

The City of Oxnard presently blends city water supplies at a ratio of two parts imported water to one part groundwater. This ratio is expected to continue indefinitely. Assuming this, Oxnard will require approximately 13,400 to 15,000 acre feet of groundwater by the year 2000. Other water systems on the Plain (which rely entirely upon groundwater) are expected to utilize approximately 12,600 to 14,500 acre feet of groundwater. The United Water Conservation District's Oxnard-Hueneme pipeline has a present design capacity of 16,500 acre feet. Assuming this capacity is not expanded, water systems on the Oxnard Plain can be expected to increase extractions from their own wells, because future demand from the M & I users will exceed the capacity of the pipeline.

Although municipal and industrial demand on the Oxnard Plain groundwater supplies is increasing, it is anticipated that demands from the agricultural sector will decline. Forecasts indicate that increases in M & I demand on the groundwater will be offset by decreases in agricultural demand even though M & I use may require treatment or blending.

- Santa Clara Valley: The Santa Clara Valley communities of Fillmore, Santa Paula and Piru depend entirely on groundwater for their M & I supplies. Increases in M & I due to population growth are expected to be approximately offset by declines in agricultural use. This is because the urbanization of the Santa Clara Valley communities will take place almost entirely on agricultural land.

- City of Ventura: The City obtains water from five different sources: 1) Lake Casitas water via the Casitas Municipal Water District, 2) Ventura River surface and groundwater from the Foster Park Diversion (via a City pipeline), 3) wells in the Mound Basin, 4) Saticoy Golf Course wells in the Santa Paula Basin and 5) Buenaventura Golf Course wells in the Santa Paula Basin.

  Anticipated population growth in the City of Ventura will require additional water supplies. As most of this population growth is anticipated to occur in the eastern portion of the City, water will not be available from Lake Casitas because these areas are beyond the service area of the Casitas Municipal Water District. Most of the increase in M & I demand in the City of Ventura will be met by increased groundwater extraction. The City expects to meet future demands after 1995 with imported State Project Water. The facilities to import this water are currently under study by the City of Ventura, United Water Conservation District, and Casitas Municipal Water District.

- Conejo-Calleguas Basin: This area represents that portion of Ventura County served by the Calleguas Municipal Water District (CMWD). This includes the communities of Moorpark, Oak Park, Thousand Oaks, Camarillo and Simi Valley (the City of Oxnard also receives Calleguas water; their water needs are discussed as part of the Oxnard Plain discussion). Most of the M & I demand in this area is met through imported water sources provided by the Metropolitan Water District (MWD) through facilities maintained by the Calleguas MWD. Some M & I demand is met by water from the Santa Rosa Groundwater Basin. Any shortfalls would likely be met by some combination of increased groundwater extraction, expanded water conservation, and/or accelerated development of additional local supplies.

- Ojai Valley: Communities in the Ojai Valley depend on two primary sources for their M & I water: Lake Casitas and groundwater. In addition to local M & I users, the City of Ventura diverts about 6,000 acre feet annually at the Foster Park Diversion and transfers the water out of the valley for use within the City. The City of

Ventura also utilizes a portion of the water provided by Lake Casitas.

Demands on Ojai Valley resources will increase in the future as population increases. However, the magnitude of increase is less than in most other areas in the County. There will be relatively modest increases in demand from the Ojai Valley itself on both surface water and groundwater. The Casitas Municipal Water District may experience difficulties in meeting the combined M & I and agricultural demand by the early 1990s if additional acreage comes under irrigation. If irrigation is not extended to new acreage, sufficient water supplies will be available to the year 2010. The safe yield of the Ojai Valley's groundwater system is not known with certainty. Casitas Municipal Water District is now carrying out an Ojai Basin Groundwater Study (1988).

4.3.2.3 Major Water Wholesale Districts

Total water demand projections for users within three major water wholesalers have been prepared on the basis of Countywide population forecast data adopted by the County Board of Supervisors on May 5, 1985 (see Land Use Appendix) and the most recent projections of irrigated agriculture. Refer to Figure 4.3.9 Casitas Municipal Water District (Table), Figure 4.3.10 United Water Conservation District (Table), and Figure 4.3.11 Calleguas Municipal Water District (Table).

The three major water wholesalers which provide water to the various retail water purveyors throughout Ventura County are as follows:

1. The Casitas Municipal Water District provides for both wholesale and some retail sale of water from Lake Casitas, for delivery in the Ventura River Drainage Area, the North Coast, and the City of Ventura.

2. The United Water Conservation District is responsible for replenishing some groundwater systems and for some wholesale deliveries to Oxnard, Port Hueneme, and other smaller systems on the Oxnard Plain. Lake Piru is United's reservoir for water which is later released; replenishing underground aquifers. United also operates the Freeman Diversion to direct Santa Clara River water to spreading grounds, to replenish the Oxnard Aquifer.

3. Calleguas Municipal Water District is responsible for providing imported water to the southeastern portions of the County and the City of Oxnard.

4.3.3 CONCLUSIONS

There are three major approaches towards meeting the future water needs of Ventura County. These include:

a. Importation of State Water Project Water into Ventura County.

b. Development of additional **water reclamation.**

c. Water conservation programs.

Regional coordination is another approach in meeting future water needs for Ventura County.

4.3.3.1 Importation of State Water Project (SWP) Water

According to a June 1987 Feasibility Report prepared by James M. Montgomery, Consulting Engineers, Inc., their final report, titled, "Feasibility of Importing State Project Water into Ventura County," presents the results of their engineering, economic and environmental evaluation of alternative approaches for meeting the future water needs of the County using State Project water.

Four principle alternatives were investigated in their study. These alternatives were:

1. Importation of the 20,000 acre-ft/yr State Water Project (SWP) entitlement from Castaic Lake via a pipeline through the Santa Clara River Valley.

2. Importation of SWP water from Pyramid Lake through Lake Piru with local runoff from Piru Creek and supplemental local water from Oat Mountain Diversion on Sespe Creek.

3. Importation of SWP water from Pyramid Lake through Lake Piru with flow in Piru Creek channel to Piru Spreading Grounds and pipeline facilities from Piru Spreading Grounds with local water from Oat Mountain Diversion on Sespe Creek.

4. Investigation of providing SWP water from Sespe Creek as a local project under the SWP consisting of one or more dams on Sespe Creek.

A final evaluation of each alternative was conducted on an economic and environmental basis in conjunction with other important criteria.

Each of the alternatives provides sufficient water to meet the projected needs within the study period. On the basis of the economic and environmental results and other criteria used in the final evaluation (effectiveness, public acceptance, compatibility, constructability, reliability, and flexibility), Alternative 3 is the most favorable. In terms of effectiveness, flexibility, and compatibility with existing plans and systems, it is ranked the highest. For the other criteria, it was ranked no lower than second. It has the lowest unit cost and it has no major adverse environmental impacts.

The recommended project is Alternative 3: Importation of SWP water from Pyramid Lake through Lake Piru with flow in Piru Creek channel to Piru Spreading Grounds and pipeline facilities from Piru Spreading Grounds with local water from Oat Mountain Diversion on Sespe Creek and with individual agency treatment plants. The water would then flow in the creek channel to Piru Spreading Grounds. From this point, a pipeline system would convey the water to Piru, Fillmore, Santa Paula and Ventura where individual agency treatment plants would be constructed. A turnout would be provided at Todd Barranca for groundwater recharge at Saticoy Spreading Grounds (Figure 4.3.2).

4.3.3.2 Water Conservation

The County prepared a "Water Conservation Management Plan" as part of the 208 and Countywide Planning process, and as a condition of the State Water Resources Control Board grant for the PTP project. As part of this plan, agricultural and urban water conservation programs have been developed. Local agencies, cities and water purveyors are voluntarily responsible for implementing these programs. A "Water Conservation Coordinator" is employed within the County Planning Department. The position is being funded jointly by the County, Casitas Municipal Water District, Calleguas Municipal Water District, and United Water Conservation District.

Various agricultural and urban water conservation measures have been selected for implementation. They are summarized as follows:

AGRICULTURAL WATER CONSERVATION MEASURES

Educational Programs/Information

Expand educational services
Workshops and field tours
Water system evaluation service
Pump efficiency testing program
Centralized irrigation management service
Evaporation pan program
Roundtable meetings

Water Resources
Forum (formerly known as the Water Resources Planning Committee)
Field Demonstrations

Other Programs

Tailwater recovery systems
Meter availability
Flexible irrigation scheduling
Other research

URBAN WATER CONSERVATION MEASURES

Education and Public Relations

In-school education programs
Landscape and maintenance education program
Water usage on bills
Water conservation literature
Speaker's bureau
Water Resources Forum

System Maintenance

Leak detection program
Systemwide water audits
Meter calibration and maintenance
Customer leak detection program

Regulation/Policies

Landscape review guidelines
Standard development condition
Emergency ordinance
Increasing block rate structure
Individual meters

Research

New plant and irrigation tests
Information and new research

4.3.3.3 Regional Coordination

Presently, there may be insufficient comprehensive Countywide planning for water resources. In some cases, water agencies have conflicting policies and goals; many water problems remain unresolved. There is a need to correlate data, develop priorities and establish new policies to meet future water needs of the County. Formation of a Countywide Water Agency has been suggested as a way to help resolve these other water problems.

However, one regional effort was implemented in December 1990, with the completion of the long awaited Freeman Diversion Structure (dam) in the Santa Clara River. The dam is used to divert seasonal water from the river to United Water Conservation District's aquifer recharge percolation ponds located in the El Rio area.

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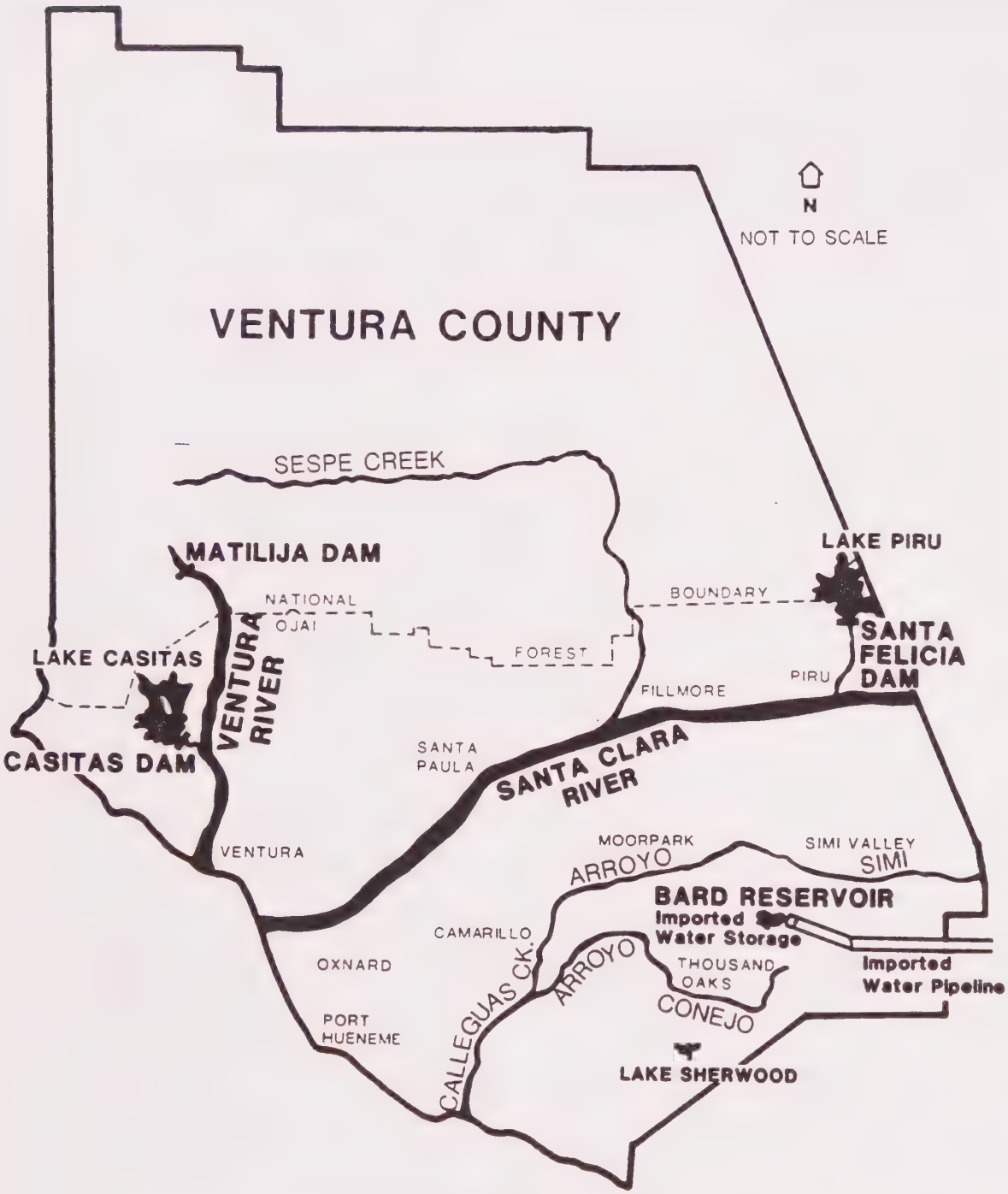
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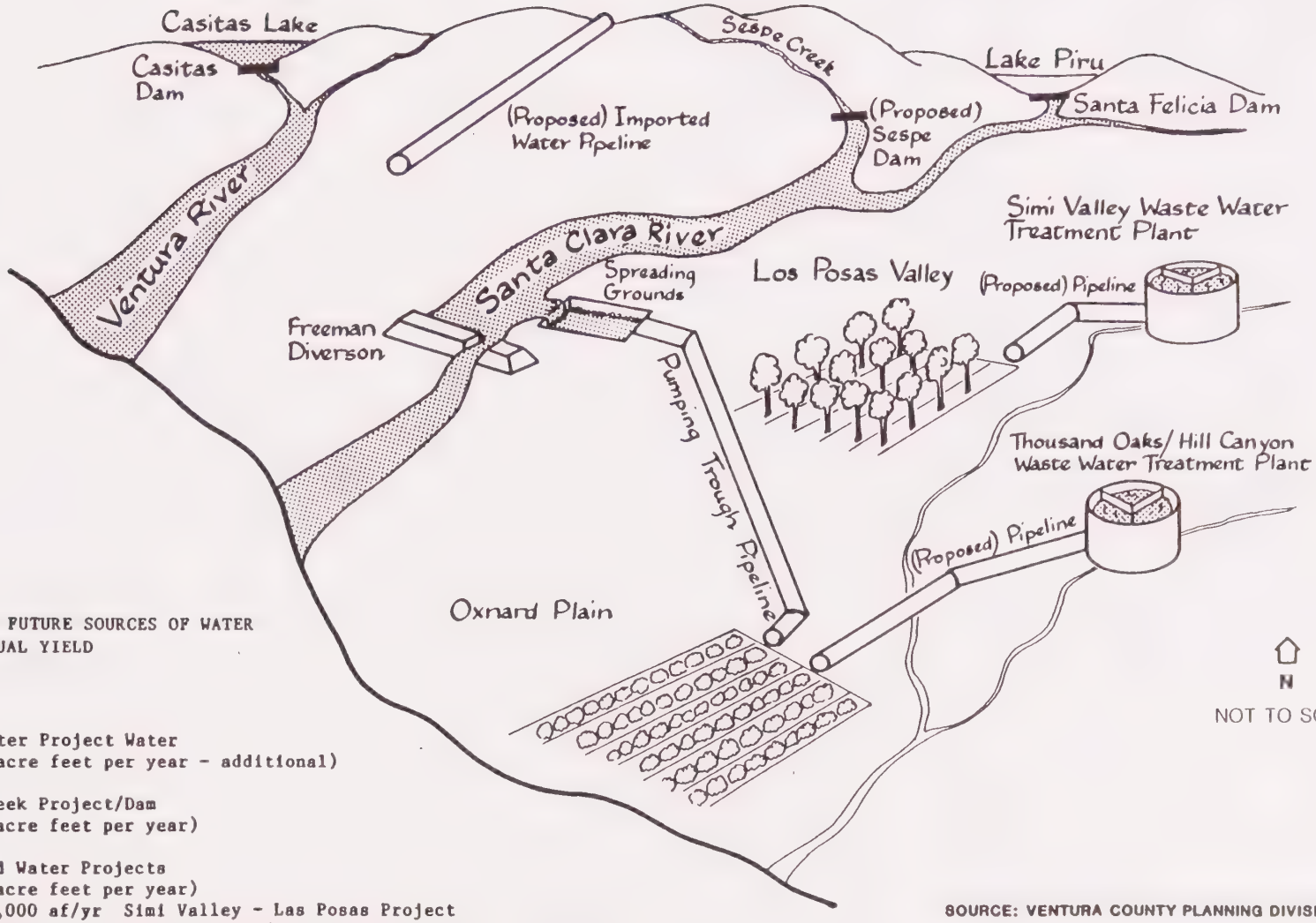
Dick Barnett, Casitas Municipal Water District
Ron Morgan, United Water Conservation District
John Munday, City of Ventura Water Department
Rick Farnsworth, County of Ventura Water Resources Department
John Turner, County of Ventura Water Resources Department
Jane Haggerty, Ventura County Planning Division



VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX FIGURE 4.3.1

MAJOR SURFACE WATER SOURCES

SOURCE: VENTURA COUNTY PLANNING DIVISION
DATE: OCTOBER 1986



PROPOSED FUTURE SOURCES OF WATER
WITH ANNUAL YIELD

State Water Project Water
(20,000 acre feet per year - additional)

Sespe Creek Project/Dam
(24,000 acre feet per year)

Reclaimed Water Projects
(18,000 acre feet per year)
6,000 af/yr Simi Valley - Las Posas Project
12,000 af/yr Thousand Oaks/Hill Canyon - Oxnard Plain Project

SOURCE: VENTURA COUNTY PLANNING DIVISION

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.3.2

water supply projects

R.12/10/91

FIGURE 4.3.3

VENTURA COUNTY WATER RESOURCES
1985 FACTS AND FIGURES

COUNTYWIDE WATER USE BY SOURCE
(in acre feet per year)

User	Groundwater	Surface Water	Imported Water	TOTAL
Municipal/Industrial (M&I)	36,000	14,000	80,000	130,000
Agricultural	237,000	30,000	10,000	277,000
	273,000	44,000	90,000	407,000

PERCENTAGE OF WATER USED BY TYPE		PERCENTAGE OF WATER USED BY SOURCE	
AGRICULTURAL USE	68%	SURFACE WATER	11%
MUNICIPAL/INDUSTRIAL USE	32%	GROUNDWATER	67%
		IMPORTED WATER	22%

RECLAIMED WATER USE - CURRENT	WATER PRICES ($ per acre foot)	
1,500 acre feet per year	Private wells	$40 - $120
	Agricultural rate*	$35 - $300
	M&I rate*	$180 - $410
	* = retail rate	

Note: Some figures included on these pages are actual usages derived from water use survey results (such as M&I use). Other numbers (such as total agricultural use and total groundwater use), are estimates based on number of irrigated acres of farmland, estimated average consumptive use rates for crops and other information. This is due to the fact that many groundwater wells in the county do not have a water meter measuring *actual* use.

COUNTYWIDE POPULATION = 620,000

AVERAGE PER CAPITA WATER USAGE = 0.22 acre feet/person/year, or 71,720 gallons/yr., or 196 gallons/day (includes residential, commercial and industrial use)

PERCENTAGE OF PEOPLE IN COUNTY USING IMPORTED WATER (M&I users) = 62%

PERCENTAGE OF AGRICULTURAL WATER USE COMING FROM GROUNDWATER = 86%

Reference Documents:

Ventura County Water Conservation Management Plan
Ventura County 208 - Water Quality Management Plan
Ventura County Urban Water Management Plan
Water Use Survey Conducted of Local Water Agencies
United Water Conservation District Annual Report on Groundwater Conditions

FIGURE 4.3.4
WATER PURVEYORS IN VENTURA COUNTY

CITIES

Camarillo
Fillmore
Oxnard
Port Hueneme
San Buenaventura
Thousand Oaks

SPECIAL DISTRICTS

Calleguas Municipal Water District
Camrosa County Water District
Casitas Municipal Water District
Channel Islands Beach Community Services District
Colonia Municipal Water District (paper)
Del Norte Municipal Water District (paper)
Hidden Valley Municipal Water District (paper)
Meiners Oaks County Water District
Ocean View Municipal Water District (paper)
Pleasant Valley County Water District
Pleasant Valley Municipal Water District (paper)
Russell Valley Municipal Water District (paper)
San Antonio Water Conservation District
United Water Conservation District
Ventura County Waterworks District No. 1 - Moorpark
Ventura County Waterworks District No. 8 - Simi Valley
Ventura County Waterworks District No. 16 - Piru
Ventura County Waterworks District No. 17 - Bell Canyon
Ventura County Waterworks District No. 19 - Las Posas Valley
Ventura River County Water District

OTHER PUBLIC WATER PURVEYORS

Camarillo Utilities Enterprise (Airport)
Camarillo State Hospital
U.S. Naval Air Station, Point Mugu
Sheriff's Honor Farm

PUC-REGULATED PRIVATE WATER PURVEYORS

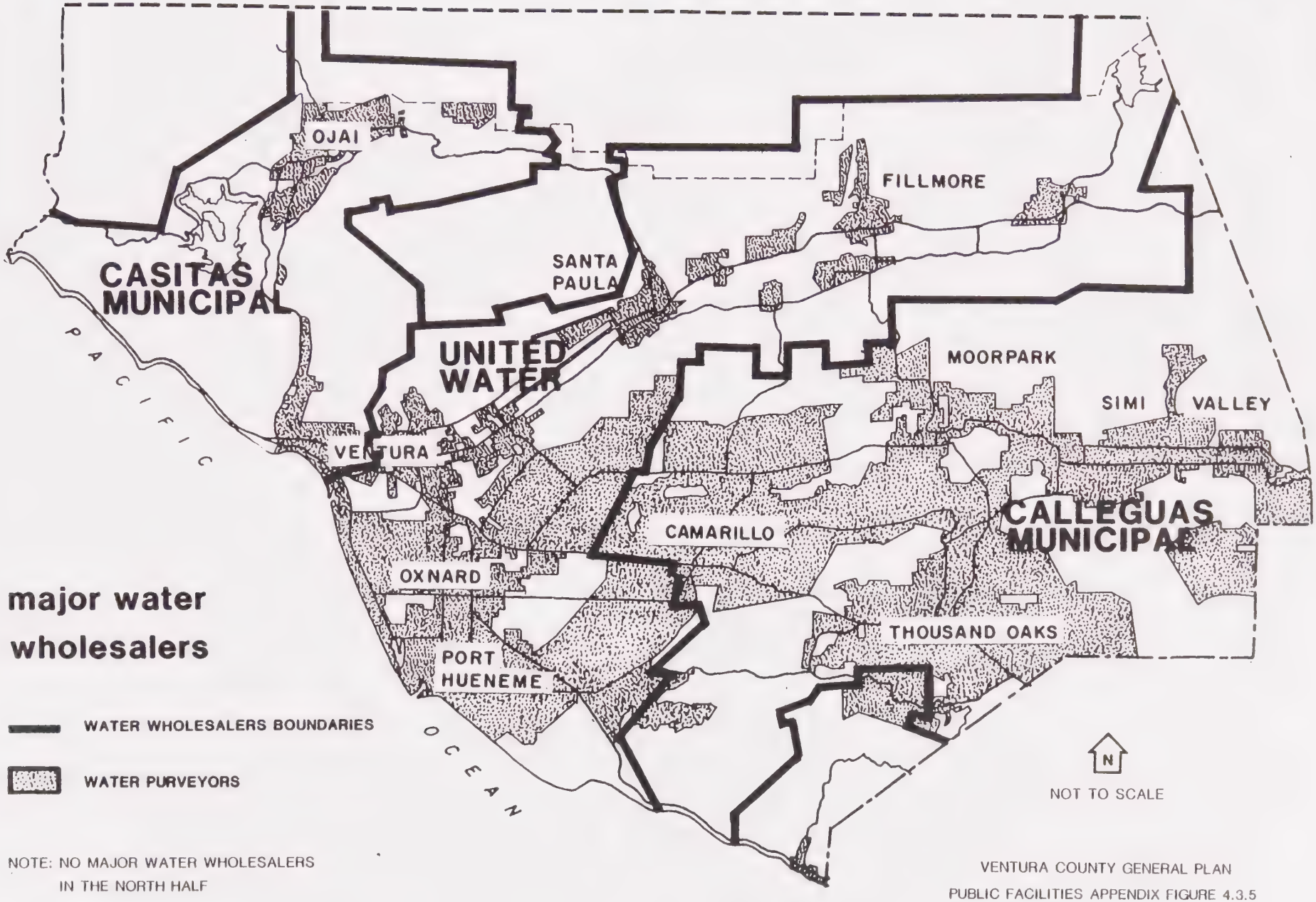
California American Water Company (Village District)
California Water Service Company (Westlake Village)
Metropolitan Water Company (Oak Park)
Rio Plaza Water Company
Santa Paula Waterworks, Incorporated
Southern California Water Company (Ojai)
Southern California Water Company (Simi Valley)
Warring Water Company (Piru)

FIGURE 4.3.4 (con't)

MUTUAL WATER COMPANIES AND OTHER PRIVATE WATER COMPANIES

Academy MWC
Aliso MWC
Alta MWC
Arroyo Las Posas
Arroyo Mobile Home Park
Berylwood Heights MWC
Bixby Balcom Water Association, Inc.
Brownstone MWC
Calcara Conejo Trailer Park
Casitas MWC
Cloverdale MWC
Community MWC
Crestview MWC
Cypress MWC
Damasos Leonos
Del Norte MWC
Dempsey Road MWC
Elkins Ranch Company
El Rio MWC
Epworth MWC
Evergreen Trailer Park
Fairview Ranches MWC
Farmers Irrigation Company
Fillmore Irrigation Company
Fillmore West Trailer Park
Fortress MWC
Fuller Falls MWC
Garden Acres MWC
Glenn View Mobile Home Park
Goodenough MWC
Gridley Road Walter Group
Hermitage MWC
Lake Sherwood MWC
La Loma Ranch MWC
Las Lomas Water System
Limoneira Ranch
Mesa Water Co.
Middle Road MWC
Montalvo MWC
Navalaire Mobile Home Park
New Camp Bartlett
North Drown Water Association
Nyeland Acres MWC
Old Creek Road MWC
Oviatt Water Association
Oxnard MWC
Oxnard Lemon MWC
Plaza Mobile Home Park
Pleasant Valley MWC
Rancho del Cielo
Rancho Matilija MWC
Raytheon Company
Rincon Water and Road Works, Inc.
Rio Manor MWC
Rissman MWC
Royal Duke Mobile Estates
San Cayetano MWC
Santa Rosa MWC
Saviers Road MWC
Senior Canyon MWC
Sherwin Acres MWC
Siete Robles MWC
Silver Wheel Ranch Mobile Home Park
Sisar MWC
Solano Verde MWC
South Mountain MWC
Southside Improvement Company
Strickland Acres MWC
Sulphur Mountain Pipeline Association
Teague McKevitt Ranch
Teal Club MWC
Thermal Belt MWC
Thermic MWC
Thomas Aquinas College
Tico MWC
Timber Canyon MWC
Tobak Ranch MWC
Tradewinds Mobile Home Park
Tres Condados Girl Scout Council
Valley Trailer Villa
Villanova Road Water Well
Vineyard Avenue Acres MWC
Vineyard Avenue Estates MWC
Vineyard MWC
White Stallion Ranch MWC
Yerba Buena Water Company
Zone MWC

Source: Draft, Local Agency Formation Commission Water Purveyors Study, October 1987



NOTE: NO MAJOR WATER WHOLESALERS IN THE NORTH HALF

SOURCE: VENTURA COUNTY PLANNING DIVISION 1986

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX FIGURE 4.3.5

FIGURE 4.3.6

MAJOR MUNICIPAL AND INDUSTRIAL RETAIL WATER PURVEYORS FOR VENTURA COUNTY CITIES AND UNINCORPORATED AREAS

SUPPLIERS	CITY SERVED	SUPPLIERS	CITY SERVED	SUPPLIERS	UNINCORPORATED AREA SERVED
California American Water Company	Thousand Oaks (part)	City of Port Hueneme Water Department	Port Hueneme	Casitas Municipal Water District*	North Coast and Ojai Valley
California Water Service Company	Thousand Oaks (part)	City of San Buenaventura Water Department	San Buenaventura	Channel Islands Beach Community Services	Hollywood by the Sea, Silver Strand and Channel Islands Harbor Area of Oxnard
Camarillo City Water Department	Camarillo	City of Thousand Oaks Water Department	Thousand Oaks (part)	Meiners Oaks County Water District	Meiners Oaks (part)
Camrosa County Water District	Camarillo	County Waterworks District #1	Moorpark	Metropolitan Water Company	Oak Park
City of Fillmore Water Department	Fillmore	County Waterworks District #8	Simi Valley (part)	Ventura River County Water District	Oak View and Oaks Meiners (part)
City of Oxnard Public Works Department	Oxnard	Santa Paula Waterworks District	Santa Paula	Warring Water Service	Piru
		Southern California Water Company	Ojai and Simi Valley (part)		

SOURCE: Ventura County Resource Management Agency, Planning Division, September 1987

*Also a wholesale supplier to various minor purveyors within the same area.

FIGURE 4.3.7

VENTURA COUNTY 1991 WATER SURVEY

City	Population[1]	M & I[2] Water Use (acre feet)[3]	Historic Per Capita Use (acre feet/year)								
			1983	1984	1985	1986	1987	1988	1989	1990	1991
Camarillo[4]	58,755	9,970	0.20	0.25	0.25	0.23	0.23	0.25	0.25	0.24	0.17
Fillmore	12,431	1,925	0.18	0.22	0.21	0.20	0.17	0.17	0.21	0.16	0.15
Moorpark	26,173	6,334	0.30	0.26	0.28	0.28	0.25	0.31	0.24	0.28	0.24
Oak Park[5]	13,355	2,400	0.18	0.24	0.19	0.21	0.23	0.25	0.27	0.24	0.18
Ojai	8,127	1,523	0.17	0.21	0.22	0.22	0.22	0.24	0.22	0.30	0.19
Oxnard	146,432	18,091	0.15	0.16	0.15	0.14	0.15	0.17	0.16	0.14	0.12
Port Hueneme	19,889	2,733	0.18	0.19	0.18	0.17	NA	NA	0.17	0.15	0.14
Santa Paula	25,847	4,041	0.17	0.20	0.18	0.18	0.20	0.18	0.19	0.17	0.16
Simi Valley	101,799	19,569	0.18	0.22	0.21	0.21	0.21	0.23	0.23	0.23	0.19
Thousand Oaks[6]	109,488	26,353	0.24	0.29	0.27	0.28	0.28	0.31	0.32	0.32	0.24
Ventura	94,340	15,701	0.20	0.24	0.21	0.19	0.19	0.19	0.21	0.19	0.17
AGGREGATE[7]	**616,636**	**108,640**	**0.19**	**0.22**	**0.21**	**0.21**	**0.21**	**0.23**	**0.23**	**0.22**	**0.18**

NA: Not Available

1 California Dept. of Finance Population Estimates

2 Municipal and Industrial

3 One Acre Foot = 325,850 gallons

4 Camarillo Population and Water Use includes portions outside the city limits that are served by the Camrosa Water District

5 Oak Park is an Unincorporated Growth Area

6 Thousand Oaks Population and Water Use includes Newbury Park which is served by the California-American Water Company

7 Does Not Include Non-Growth Areas outside cities

SOURCE: Ventura County Water Conservation Program - Sept. 1992

FIGURE 4.3.8
VENTURA COUNTY 1991 URBAN WATER SURVEY

CITY	POPULATION[1]	SUPPLY BY SOURCE FOR ALL WATER USES (Including Agricultural Uses Within Cities)						MUNICIPAL/INDUSTRIAL USE Acre-feet/Year					AG USE Ac Ft/Yr
		WATER PURVEYOR	GROUND WATER	SURFACE WATER	IMPORTED WATER	RECLAIMED WATER	TOTAL	COMM'L	INDUST'L	RESIDT'L	OTHER (Parks, etc.)	M&I[2] TOTAL	AG TOTAL
CAMARILLO	58,755	City of Camarillo	3,309	0	2,670	0	5,979	761	169	3,154	719	4,803	997
		Camrosa CWD	1,430	0	6,981	0	8,411	451	0	4,140	576	5,167	2,741
FILLMORE	12,431	City of Fillmore	2,364	0	0	0	2,364	85	134	1,508	198	1,925	3
MOORPARK	26,173	Ventura Co. WW Dist.#1	1,890	NA	7,774	NA	9,664	565	288	4,039	1,442	6,334	3,284
OAK PARK[3]	13,355	Metropolitan Water Co.	0	0	2,788	0	2,788	124	0	2,061	215	2,400	0
OJAI	8,127	Southern California Water Co.	1,820	284	0	0	2,104	0	0	1,446	77	1,523	71
OXNARD	146,432	City of Oxnard	5,586	0	13,677	0	19,263	4,094	3,152	10,014	831	18,091	28
PORT HUENEME	19,889	City of Port Hueneme	6	0	2,727	0	2,733	NA	NA	NA	NA	2,733	0
SANTA PAULA	25,847	Santa Paula Waterworks	4,850	1,108	0	0	5,958	1,015	0	2,781	245	4,041	1,479
SIMI VALLEY	101,799	Southern California Water Co.	0	0	6,305	0	6,305	0	79	5,385	525	5,989	0
		City of Simi Valley Water Works Dist. #8	64	0	15,277	0	15,341	1,270	163	8,947	3,200	13,580	123
THOUSAND OAKS	109,488	City of Thousand Oaks	0	0	8,098	0	8,098	847	0	5,695	1,212	7,754	0
		California Water Service	0	0	7,159	0	7,159	NA	NA	NA	NA	7,159	0
		Cal-American Water Co.	0	0	12,185	0	12,185	2,157	1,005	7,374	904	11,440	0
VENTURA	94,340	City of Ventura	10,129	4,830	0	665	15,624	5,075	1,247	8,531	848	15,701	0

NA: Not Available
[1] California Dept. of Finance Population Estimates
[2] Does not include unaccounted for water (i.e., leaks, unmetered uses, etc.)
[3] Oak Park is an unincorporated Growth Area
NOTE: Variance between supply and use information is a result of data covering slightly different time periods.
SOURCE: Ventura County Water Conservation Program, Sept. 1992

FIGURE 4.3.9a

WATER DEMAND PROJECTIONS WITHIN CASITAS MWD
(ACRE-FEET PER YEAR)

Year	Population[1]	M & I Demand[2]	Ag. Acres[3]	Maximum Ag. Acres[4]	Ag. Demand[5]	Maximum Ag. Demand[5]	Oil Co. Demand[6]	Unaccounted[7] Water	Total Demand	Maximum Total Demand
1985	52,093	11,460	5,040	6,500	10,080	13,000	3,480	1,020	26,040	28,960
1990	54,678	12,029	5,010	7,050	10,020	14,100	4,500	1,160	27,709	31,789
1995	57,348	12,617	4,980	7,800	9,960	15,600	4,500	1,180	28,257	33,897
2000	59,759	13,147	4,950	8,160	9,900	16,320	4,500	1,190	28,737	35,157
2005	62,162	13,676	4,585	8,160	9,170	16,320	4,500	1,200	28,546	35,696
2010	64,328	14,152	4,220	8,160	8,440	16,320	4,500	1,210	28,302	36,182

[1] Based on Countywide population forecast, adopted by Board of Supervisors 5/7/85

[2] Municipal and Industrial demand, based on population forecast times per capita M & I use factor (0.22 acre-feet per person per year) taken from the Ventura County Water Conservation Management Plan.

[3] Source of data is the Ventura County General Plan Draft Land Use Appendix.

[4] Source: Report on Feasibility of Importing Water into Ventura County (1987) Table 2-4. "The 'maximum' values are based on firm estimates from developments in progress or planned. Those projects that will be completed before 1990 are added into acreage for that year. The remainder of the firm planned agricultural acreage is added to the 1995 and subsequent years' acreage." Compiled by Casitas MWD.

[5] Based on water use factor of 2.0 acre-feet per acre per year.

[6] Source: Report on Feasibility of Importing Water into Ventura County (1987). "Actual value used for 1985 but the remaining years represent maximum potential demand for the oil companies."

[7] Source: Report on Feasibility of Importing Water into Ventura County (1987) "Percentage of unaccounted water is maintained consistently throughout the Study Period."

All figures in this table are rough estimates. The Casitas MWD is presently (11/87) preparing a supply/demand study which will more precisely address this issue.

FIGURE 4.3.9b

WATER SUPPLY PROJECTIONS WITHIN CASITAS MWD
(ACRE-FEET PER YEAR)

Year	Groundwater[1]	Lake Casitas[1] (city portion)	Lake Casitas[1] (remainder)	Imported (State) Water	Recycled[2] Water	Total Supply
1985	10,390	9,100	11,250	0	0	30,740
1990	10,000	9,800	10,550	0	1,300	31,650
1995	10,000	10,000	10,350	0	1,300	31,650
2000	10,000	10,000	10,350	0	1,600	31,950
2005	10,000	10,000	10,350	0	1,600	31,950
2010	10,000	10,000	10,350	0	1,600	31,950

[1] Source: Report on Feasibility of Importing State Project Water into Ventura County (1987), Table 3-1 All of the groundwater is pumped by retail purveyors and individuals other than Casitas MWD.

[2] Source: 1980 208 Water Quality Plan Appendix IV, Table 9, p. 23.
Discussions with Casitas (11/87) indicate that Casitas does not presently plan to construct reclamation facilities.

FIGURE 4.3.10a

WATER DEMAND PROJECTIONS WITHIN UNITED WCD
(ACRE-FEET PER YEAR)

			Ag. Acres[3]				
Year	Population[1]	M & I Demand[2]	Santa Clara	Coastal Plain	Ag Demand[4]	Unaccounted[5] Water	Total Demand
1985	264,374	50,231	32,190	32,305	176,754	3,310	230,295
1990	290,346	55,166	32,065	31,435	173,782	3,760	232,708
1995	318,254	60,468	31,935	30,560	170,782	4,060	235,310
2000	352,240	66,926	31,810	29,695	167,826	4,530	239,282
2005	379,365	72,079	30,365	28,610	161,013	4,810	237,902
2010	408,556	77,626	28,915	27,525	154,187	5,090	236,903

[1] Based on Countywide population forecasts, adopted by Board of Supervisors 5/7/85.

[2] Municipal and industrial demand, based on population forecast times per capita M & I use factor (0.19 acre-feet per person per year).
Source: Ventura County Planning Division.

[3] Source of data for Ag Acres is the Draft Land Use Appendix and Irrigated Farmland data from the Important Farmlands Inventory.

[4] Based on water use factors of 2.41 acre-feet per acre per year for Santa Clara Valley and 3.07 acre-feet per acre per year for Coastal Plain.

[5] Values are M & I losses only based on reported data in the Urban Water Management Plans for water agencies within the United District. The percentage of unaccounted water is maintained consistently throughout the study period.

FIGURE 4.3.10b

WATER SUPPLY PROJECTIONS WITHIN UNITED WCD
(ACRE-FEET PER YEAR)

Year	Santa Clara Valley			Coastal Plain			(Feasibility) Total Supply	(County)* Total Supply
	Surface[1]	Ground (Feasibility)[2]	(County)* Ground	Surface[3]	Ground[4]	Imported[5]		
1985	12,950	69,750	69,750	8,440	123,500	14,000	228,640	228,640
1990	12,000	36,700	69,750	25,950	113,400	21,840	209,890	242,940
1995	12,000	36,700	69,750	26,020	113,800	22,950	211,470	244,520
2000	12,000	36,700	69,750	26,100	113,600	25,550	213,950	247,000
2005	12,000	36,700	69,750	26,150	113,300	27,460	215,610	248,660
2010	12,000	36,700	69,750	26,230	113,000	29,370	217,300	250,350

Source: Report on Feasibility of Importing State Project Water into Ventura County (1987), Table 33.

[1] Surface water diversions were over 12,000 acre feet per year ending July 1, 1985 according to United's Annual Report on Groundwater Conditions.

[2] Groundwater supplies are based on safe yield estimates from available references except 1985 which is actual use.

[3] Coastal Plain surface water includes the Pleasant Valley pipeline, the Oxnard - Port Hueneme pipeline (yield from surface water although extracted from groundwater), the Pumping Trough Pipeline (50 percent of maximum supply assumed to be surface water), and reclaimed water from the City.

[4] Values based on GMA approximated restrictions (including overdraft) on Coastal Plain basins Task 86-3) plus amounts from the Mound Basin in the City except 1985 which is from actual use data from United's Annual Report.

[5] Includes supplies imported by the City from the Ventura River Foster Park facilities and those imported by Oxnard from Calleguas assuming supply of two-thirds of Oxnard's demand by Calleguas except 1985 which is actual use.

(County)* The County Public Works Agency, Groundwater Section does not agree with the consultant's method of computing future groundwater extractions for the Santa Clara River Valley, and believes a more accurate projection is one based on the actual groundwater use in 1985 or later. The County's higher projected groundwater use also increases the total supply above that computed by the consultant.

FIGURE 4.3.11a

WATER DEMAND PROJECTIONS WITHIN CALLEGUAS MWD*
(ACRE-FEET PER YEAR)

Year	Population[1]	M & I Demand[2]	Ag. Acres[3]	Ag. Demand[4]	Total Demand
1985	266,494	66,624	26,630	53,260	119,884
1990	312,709	78,177	25,080	50,160	128,337
1995	346,846	86,711	23,540	47,080	133,791
2000	374,269	93,567	21,980	43,960	137,527
2005	398,698	99,675	21,780	43,560	143,235
2010	419,284	104,821	21,580	43,160	147,981

[1] Based on Countywide population forecast, adopted by County Board of Supervisors 5/7/85.

[2] Municipal and industrial demand, based on population forecast times per capita M & I use factor (0.25 acre-feet per person per year compiled by PWA 8/87 from average of 1985 Water Use Survey).

[3] Source of Ag Acres is the Draft Land Use Appendix and Irrigated Farmland from Important Farmlands Inventory.

[4] Based on Agricultural Water Demand Factor (2.0 AF/acre/year from County of Ventura Water Conservation Management Plan (1983).

*Excluding the City of Oxnard

FIGURE 4.3.11b

WATER SUPPLY PROJECTIONS WITHIN CALLEGUAS MWD
(ACRE-FEET PER YEAR)

Year	Groundwater[1]	Surface[2] Water	Imported[3]	Recycled[4] Water	Total Supply
1985	79,750	0	190,000	1,725	271,475
1990	79,750	900	190,000	1,725	272,375
1995	79,750	900	190,000	23,015	293,665
2000	79,750	900	190,000	26,475	297,125
2005	79,750	900	190,000	26,475	297,125
2010	79,750	900	190,000	26,475	297,125

[1] The 79,750 acre feet of groundwater is based on estimate of 273,000 AF/Y Countywide, less the groundwater supply projections for Casitas and United. All of this water is pumped by individuals and agencies other than Calleguas MWD.

[2] Source: 1980 208 Plan Appendix IV, Table 9, p. 26.

[3] Ibid.

[4] Assumes continuation of current reclamation at Camarillo and Camrosa wastewater Treatment Plants and completion of reclamation facilities at the Hill Canyon and Simi Wastewater Plants by 1995.

4.4 WASTE TREATMENT AND DISPOSAL FACILITIES

Waste treatment/disposal facilities include the following types of facilities:

- **On-Site Septic Systems (Individual Sewage Disposal Systems)**
- **Sewage Treatment Facilities** (excluding septic systems)
- **Solid Waste Disposal Sites**
- **Off-Site Waste Treatment Facilities** (excluding sewage)

Each type of waste facility will be described according to type of waste handled and location of facility in the County. The Waste Facilities Map (Figure 4.4.1) shows the location of sewage treatment facilities and solid waste disposal sites.

4.4.1 ON-SITE SEPTIC SYSTEMS (INDIVIDUAL SEWAGE DISPOSAL SYSTEMS)

On-site septic systems, also referred to as individual sewage disposal systems (ISDS), are those liquid waste systems which dispose of sewage generated by individual residences and businesses in unsewered areas. A conventional ISDS usually includes a septic tank and either a seepage pit or leach lines. Mound systems and subsurface sand filtration systems are two alternative ISDS which may be approved for use in areas where there are shallow soils over bedrock, high groundwater (either seasonal or permanent), or fractured bedrock. They are restricted for use only under specific conditions and guidelines in those areas of the County where community sewer systems are not available and on-site conditions preclude the use of conventional septic tank/soil absorption systems. Only domestic sewage (i.e. human waste from everyday living activities) can be discharged into a septic system.

The siting criteria used to determine whether a lot is suitable for an ISDS include the lot's size, the tested soil absorption rate, the depth to groundwater, the setback from surface waters and wells, and the topography and geology of the lot. Refer to Figure 4.4.2 for a map indicating areas in the County with severe septic system limitation. These siting criteria are based on the Uniform Plumbing Code as incorporated into the Ventura County Building Code and further detailed in the Ventura County Environmental Health Division ISDS Technical Information Manual.

Mound and subsurface filtration systems must be designed by a Registered Civil Engineer. The County requires that such systems be officially documented on the deed of the property on which they are installed plus the property owner proposing an alternate system must grant an easement to County Service Area (CSA) 32. The property must be in CSA 32 or another public agency capable of providing maintenance or monitoring services. The design engineer must verify in writing that the system was installed as designed.

As of 1987, it is estimated there are in excess of 15,000 ISDS located Countywide.

County Service Area No. 32 was formed to ensure that privately-owned ISDS are properly maintained. CSA 32 is administered through the County Environmental Health Division.

4.4.2 SEWAGE TREATMENT FACILITIES

Sewage treatment facilities collect water used for domestic, commercial and industrial purposes, treat it to remove organic and inorganic waste materials, and discharge the treated effluent to the environment. Operation of these facilities is regulated by local, State and Federal agencies to protect the County's surface and groundwater from biological and chemical pollutants.

The vast majority of the County's population is served by one of the 15 **community sewage treatment facilities** also commonly referred to as wastewater treatment facilities. The Ventura Regional Sanitation District

operates seven of these; one is operated by the County and seven by local City or special districts. The location of the **community sewage treatment facilities** in Ventura County are shown on the Waste Facilities Map (see Figure 4.4.1). There are other sewage treatment facilities (i.e., **on-site wastewater treatment facilities**) within the County that are special purpose facilities such as at Thomas Aquinas College and the new County Jail, that are not depicted on the Map.

In addition, a number of County residents within the Triunfo County Sanitation District (Southeast Ventura County) are served (by a reciprocal agreement with the Las Virgenes Sanitation District) by the Tapia Wastewater Treatment Plant in Los Angeles County.

A survey was conducted in April 1983 requesting information regarding sewage treatment plant capacity, sludge quantities, grit and screenings quantities, methods of sludge dewatering and disposal, and solids disposal problems. The survey was answered by all of the public operated sewage treatment plants. Information relating to other plants, operated by the military or private industry, was not gathered.

Approximately 43,000 wet tons of sludge were generated in 1984 by the 15 plants surveyed for this analysis. Eventually, all of this sludge is either disposed as a soil amendment or is transported to a sanitary landfill.

Brief descriptions of each community sewage treatment plant are included in the following paragraphs:

4.4.2.1 Existing and Potential Sewage Treatment Plants

(1) Camarillo Sanitary District Water Reclamation Plant: The plant is located at 150 Howard Road, Camarillo, near the Conejo Creek in southeast Ventura County, and is operated by the Camarillo Sanitary District. Design capacity of this secondary treatment plant is 6.0 million gallons per day (mgd). Sludge is anaerobically digested and dewatered on drying beds. Dried sludge is disposed by spreading on agricultural lands, specifically a local sod farm. Grit and screenings are hauled to the Oxnard Coastal Sanitary Landfill. The treatment plant presently generates approximately 1,200 tons of sludge and 90 tons of grit/screenings annually as of 1985. There are no current expansion plans for this plant.

(2) Camrosa Wastewater Treatment Plant: The plant is located at 1878 South Lewis Road in the unincorporated portion of Ventura County about one-half mile east of Calleguas Creek and is operated by Ventura Regional Sanitation District. The treatment plant provides secondary treatment and has a design capacity of 1.5 mgd. Sludge is treated by anaerobic digestion and is dewatered in drying beds, and 75 tons of grit (per year) is disposed at the Bailard Landfill. There are no current expansion plans, but the plant will have to either expand or utilize a portion of the Camarillo Sanitary District Water Reclamation Plant capacity.

(3) Ventura Water Renovation Facility: The facility is located at 1400 Spinnaker Drive, Ventura, near the mouth of the Santa Clara River and is operated by the City of Ventura. Wastewater receives tertiary treatment before final disposal to the Santa Clara River. Design capacity of the treatment plant is 14.0 mgd. Sludge is stabilized by anaerobic digesters and is dewatered by filter presses. The plant averages about 9,500 tons of dried sludge annually, which is disposed at the Simi Valley Landfill. Approximately 450 tons of grit is trucked to the Ventura Coastal Landfill annually. As of 1987, the chlorine contact ponds at the Ventura Water Renovation Facility are currently being upgraded from asphalt-lined bottoms to concrete bottoms with no immediate plans for future expansion of the facility. There are no immediate expansion plans, but the City of Ventura will need to consider expansion of its Water Renovation Facility before the year 2010.

(4) Fillmore Wastewater Treatment Plant: The plant is located at 50 "C" Street, Fillmore, in eastern Ventura County north of the Santa Clara River and is operated by VRSD. Wastewater receives secondary treatment before disposal in percolation ponds. Design capacity of the treatment plant is 1.33 mgd. The treatment plant presently generates approximately 600 tons of sludge and 75 tons of grit screenings per year. This plant is in the process of being expanded to 2.05 mgd capacity.

(5) Montalvo Municipal Improvement District Treatment Facility and Liquid Waste Treatment Facility No. 1: The Montalvo Municipal Improvement District Treatment Facility is located at 3555 Ventura Road on the north bank of the Santa Clara River, adjacent to Liquid Waste Treatment Facility No. 1 and is operated by VRSD. Sludge generated by the batch reactor activated treatment plant is transferred to the adjacent Liquid Waste Treatment Facility for further treatment. The treatment capacity was recently expanded (1988) to 0.36 mgd. There are no additional expansion plans at this time.

(6) Moorpark Wastewater Treatment Plant (County Waterworks District No. 1): The plant is located west of Moorpark in the unincorporated portion of Ventura County, just south of Highway 118 and is operated by the County of Ventura. As of 1987, the treatment plant is operating at near its 1.5 mgd capacity, with plans to expand the plant to 3.0 mgd in 1988-89. There are no current expansion plans beyond this total. Sludges are dried on site, in ponds. Ponds are cleaned every two years and the dried sludge is disposed of at the Toland Road landfill. No tonnages were available for sludge from the Moorpark wastewater treatment plant at the time of the study in 1984 as it was undergoing expansion at that time.

(7) Nyeland Acres Wastewater Treatment Plant (County Waterworks District No. 1): The plant is located at 3250 East Ventura Blvd. in the unincorporated portion of Ventura County, just north of the 101 Freeway and is operated by VRSD. Wastewater receives secondary treatment before disposal to the Beardsley Wash. Design capacity of the plant is 0.22 mgd. Liquid sludge from the treatment plant is periodically removed and transported to the Liquid Waste Treatment Facility for additional treatment. Approximately 200 tons of liquid sludge per year are generated at Nyeland Acres. There are no current expansion plans for this plant.

(8) Ojai Valley Sanitary District Wastewater Treatment Plant: The plant is located in the unincorporated portion of Ventura County, at 6363 North Ventura Avenue and is operated by the Ojai Valley Sanitary District. Wastewater receives secondary treatment before final disposal to the Ventura River. Design capacity of the treatment plant is 3.0 mgd. Sludge is treated by anaerobic digestion, and is dewatered in drying beds. The dried sludge is made available to the public for use as soil amendment. The treatment plant presently produces 365 tons of dried sludge/grit annually.

The Ojai Valley Sanitary District Wastewater Treatment Plant has sufficient capacity until the year 2010. Design for a major treatment plan upgrade to provide advanced secondary plus tertiary treatment is now in progress with a construction completion date in 1996. The upgrade will not increase capacity but will double sludge production.

The Ojai Valley Sanitary District Wastewater Treatment Plant has sufficient capacity until the year 2005, but possibly will need to expand by the year 2010. According to the General Manager of the Ojai Valley Sanitary District, this projected information is based on historical per capita wastewater flows of 300 gallons per day per "equivalent residential unit." By July 1993, it is expected that modifications will be completed so that the plant will provide full tertiary treatment.

(9) City of Oxnard Wastewater Treatment Plant: The facility is located at 6001 South Perkings Road, Oxnard, near Ormond Beach and is operated by City of Oxnard. The plant is situated on a 17 acre site adjacent to a residential development.

Wastewater receives secondary treatment before final disposal to the Pacific Ocean. Design capacity of the treatment plant in 1992 is 31.7 mgd. Sludge receives anaerobic digestion, with dewatering by belt press. The Oxnard Wastewater Treatment Facility is the largest producer of municipal sludge in Ventura County. The treatment plant presently averages 22,000 tons of dewatered sludge and 600 tons of grit/screenings annually. Sludge is trucked to the Simi Valley landfill and grit/screenings are trucked to the Bailard landfill for final disposal. This treatment plant also processes wastewater from the Point Mugu Naval Air Weapons Station, California Air National Guard Facility, Port Hueneme Naval Construction Battalion Center, and the City of Port Hueneme. The City of Oxnard Wastewater Treatment Plant was expanded in 1990, to a design capacity of 31.7 mgd, with ultimate design capacity of 39.6 mgd.

(10) Piru (Waterworks District No. 16) Wastewater Treatment Plant: The plant is located in the unincorporated portion of Ventura County, north of Highway 126 and is operated by VRSD. Design capacity of this secondary treatment plant is 0.2 mgd. Sludge is subjected to aerobic digestion and is dewatered in sludge drying beds. The treatment plant averages 30 tons of sludge/grit annually, all of which is trucked to the Toland Road Sanitary Landfill for disposal. There are no current expansion plans for this plant.

(11) City of Santa Paula Wastewater Treatment Plant: The plant is located at 905 Corporation Street, Santa Paula, south of the 126 Freeway and is operated by VRSD. Wastewater receives secondary treatment before final disposal to the Santa Clara River. Design capacity of the treatment plant is 2.55 mgd. Sludge is treated by anaerobic digestion and is dewatered in sludge drying beds. The treatment plant presently generates 500 tons of dried sludge and 100 tons of grit annually. All the sludge is composted and reused as a soil amendment for landscaping at the Santa Clara Landfill. A major expansion project may be needed about the year 2010.

(12) Saticoy Sanitary District Wastewater Treatment Plant: The plant is situated in the unincorporated portion of Ventura County north of the Santa Clara River and is operated by the Saticoy Sanitary District with a contract to VRSD. The physical plant consists of three septic tanks in series and approximately three acres of effluent percolation ponds. The average dry weather flow design capacity of the treatment plant is 0.24 mgd. Sludge and grit settled in the septic tanks is removed once every two years and trucked to the Liquid Waste Treatment Facility No. 1 for additional treatment. The plant averages 25 tons of sludge and grit generated annually. The Saticoy Sanitary District is currently improving their overall Wastewater Treatment Plant.

The Saticoy Sanitary District Wastewater Treatment Plant will reach capacity between 2010 and 2020. It has several options to examine including expansion at the site, conversion to different types of treatment process or connection to the City of Ventura Water Renovation Facility.

(13) Simi Valley County Sanitation District Water Quality Control Plant: The plant is located at 600 W. Los Angeles Avenue, Simi Valley (Arroyo Simi) and is operated by the City of Simi Valley. Wastewater receives tertiary treatment before final disposal in the Arroyo Simi. Design capacity of the treatment plant is 12.5 mgd. Sludge is subjected to anaerobic digestion and approximately 2,200 dry tons per year of digested sludge is mechanically dewatered by belt filter pressing and then solar dried in drying beds for hauling to a landfill if necessary. The treatment plant averages 600 tons of grit annually, which is disposed at the Simi Valley landfill.

Presently all dried sludge from the treatment plant goes to the Simi Valley Landfill, however, composting for public reuse is planned for the future. The plant is now in the first phase (12.5 mgd capacity in 1993) of a four phase expansion. The composting capability will be part of the last phase (17.5 mgd capacity).

(14) City of Thousand Oaks - Hill Canyon Wastewater Treatment Plant: The plant is located at 9600 Santa Rosa Valley, Thousand Oaks, adjacent to the north fork of the Arroyo Conejo and is owned and operated by the City of Thousand Oaks. Wastewater receives tertiary treatment before final disposal to the north fork of the Arroyo Conejo. Design capacity of the treatment plant is 10.8 mgd. Sludge is digested and then dewatered on a filler belt press and in drying beds. The treatment plant presently generates approximately 2,000 tons of dried sludge and 120 tons of grit annually. The sludge and grit are disposed in the Bailard Landfill. Phase II expansion to 12 mgd. is currently underway. The ultimate plant capacity will be designed for 14 mgd.

(15) City of Thousand Oaks - Olsen Road Water Reclamation Plant: The plant is located at 2051 Olsen Road, Thousand Oaks, off Freeway 23 and is operated by the City of Thousand Oaks. Design capacity of the treatment plant is 0.75 mgd. Sludge is treated by aerobic digestion and is dewatered in drying beds. Dried sludge is trucked to the Hill Canyon Plant for ultimate disposal in the Bailard Landfill. The treatment plant presently produces 60 tons of sludge and five tons of grit annually. The treatment plant presently produces 60 tons of sludge and five tons of grit annually. Wastewater receives secondary treatment before it is discharged to an adjacent water course. There are no expansion plans for this plant.

(16) Potential Saticoy Sewage Waste Treatment Facility: There is the potential for a new sewage treatment facility in Saticoy in the future. A precise location has not been determined.

(17) Limoneira Wastewater Treatment Plant: The plant is located about 2,000 feet west of Cummings Road at Middle Road. The plant is operated by the Limoneira Company. About 50,000 gallons per day of liquid wastes from packing houses, residences and a trailer park are treated by means of two Imhoff tanks. Effluent is discharged to percolation/ evaporation lagoons.

4.4.2.2 Sanitation Districts

The Ventura County Sanitation Districts Map (Figure 4.4.3) shows the County sanitation districts and their respective service areas.

The Sanitation Service Areas located within Ventura County are County Service Area 29 and the Triunfo County Sanitation District. County Service Area 29 collects sewage for the North Coast area. Its facilities are connected to the City of Ventura's sewerage system, which treats the effluent on a contractual basis.

The Triunfo County Sanitation District currently provides sewer service to portions of Westlake Village, Thousand Oaks, Lake Sherwood, Oak Park and Bell Canyon. There are over 8,722 connections to the sewer system resulting in a daily flow of three million gallons. The wastewater is conveyed to the Tapia Wastewater Treatment Plant (located in Calabasas Los Angeles County), which is jointly owned by the Triunfo County Sanitation District and the Las Virgenes Metropolitan Water District. With the development of Lake Sherwood, Oak Park and the North Ranch areas of the City of Thousand Oaks, approximately 2,000 new connections are anticipated by 1998. Appropriate expansion of the treatment plant is taking place to facilitate this growth.

4.4.2.3 Projected Wastewater Flows by Sewer Service Areas

The Countywide population and dwelling unit forecasts, which were adopted by the Board of Supervisors on May 7, 1985, were used as the basis for the Sanitation District service area population forecasts (Refer to the Land Use Appendix).

The adopted forecasts were prepared at the Growth/Nongrowth area level, which does not coincide with the sewer service area boundaries. To more closely approximate the sewer service area boundaries, the adopted forecasts were disaggregated by Analysis Zone (AZ), (See Land Use Appendix), then reaggregated by sewer service area.

It should be noted that current sewer service area boundaries were not used. Instead, LAFCO adopted Sphere of Influence boundaries for each sewer district were used. The Sphere boundaries, which represent the ultimate service area boundaries, are a more accurate indication of future areas to be served.

The steps in determining wastewater flows for each sewer service district area are listed below:

(1) Determine Population by Sewer Service Area

- To disaggregate the population forecast by AZ, and to interpolate that forecast for intervening years, a disaggregation and interpolation of the dwelling unit forecast was undertaken for the year 2010. This disaggregation was based on a ratio of the general plan holding capacity for the individual AZ, compared to the holding capacity for the entire Growth/Nongrowth Area in which the AZ is located.

- The year 2010 dwelling unit forecast figures for each AZ were then interpolated back in five-year increments between 1980 and 2010. Both this interpolation and the interpolation which was used in the adopted Countywide dwelling unit forecast are based on a straight-line interpolation, so the disaggregation figures are consistent with the adopted dwelling unit forecast figures.

- The population per dwelling unit ratios for each AZ were then obtained by dividing the actual 1980 ratio for the AZ by the 1980 Countywide ratio, then multiplying by the adopted Countywide ratio which was forecast for each forecast year. The ratios for individual AZ's were also merged with the County ratio in 100 years. This is the same methodology which

was used to obtain the ratios for each Growth/Nongrowth Area which appear in the adopted forecasts.

- The population forecast for each AZ was obtained by multiplying the dwelling unit forecast by the population per dwelling unit forecast.

- The population forecast for each sewer service district was obtained by adding or subtracting the AZ forecasts from Growth/Nongrowth Area totals (where appropriate) or by simply aggregating the Analysis Zones (see Figure 4.4.4). In some cases, the AZ boundaries are split by sewer service area boundaries, in which case further disaggregations were performed, based on general plan holding capacity. However, where the AZ boundary is relatively close to the sewer service area boundary, the figure for the entire AZ was used.

(2) Determine Industrial Acreage for Sewer Service Areas

- The industrial acreage forecast for the year 2010 was obtained by determining future acreages for individually-designated lands, as shown on each general plan. These acreage figures were disaggregated by AZ. It was assumed that the designation would be built out by the year 2010.

- An interpolation was made between 1980 and 2010, based on 1976 records from the County Assessor's Office of actual industrial acreage, and based on industrial acreage forecasts prepared at the AZ level for the 1980 "208" Plan.

- The industrial acreage forecast for each sewer service district was obtained by reaggregating the AZ forecast figures by sewer service districts (see Figure 4.4.5).

(3) Determine Domestic/Commercial Wasteload Flow

- Domestic/commercial loading factors (expressed in gallons per capita per day) were obtained by dividing current average influent flow volumes by the 1985 population. (In some cases, the current flow volumes would have not yet been obtained. For these districts, the 1980 "208" Plan loading factors were used.) The loading factors differ from sewer district to sewer district, primarily due to differences in the amount of commercial activity. Flow factors may also be affected by infiltration of the collection system (see Figure 4.4.6).

- Total flow from domestic/commercial uses was then forecast by multiplying the population forecast by the domestic/commercial loading factor (see Figure 4.4.7).

(4) Determine Industrial Wasteload Flow

- Industrial loading factors (expressed in gallons per acre per day) were determined by dividing current average industrial inflow volumes by the 1985 industrial acreage estimate.

- Total flow from industrial uses was forecast by multiplying the industrial acreage forecast by the industrial loading factor (see Figure 4.4.8).

(5) Determine Total Wasteload Flow

Total wasteload flow was determined simply by adding the forecast domestic/commercial wasteload flow to the forecast industrial wasteload flow. Information on existing capacity, projected flow to the year 2010, and future expansion plans for each sewage treatment plant is also included (see Figure 4.4.9).

(6) Compare Total Wasteload Flow to Treatment Plant Capacity

As a final step, wasteload flows were plotted graphically against current and future treatment plant capacity levels, to determine future treatment facility needs over the next 20 years.

Figures 4.4.10 through 4.4.25 show Sewage Treatment Plant capacity staging for each treatment plant from 1980 to 2010 in order to accommodate development within each service area. Information for the Liquid Waste Treatment Facility No. 1 (Montalvo) and Thomas Aquinas College is not available.

4.4.3 SOLID WASTE DISPOSAL SITES

Solid waste disposal sites (aka "waste management units") are those facilities used for the final deposition of wastes onto the land. Wastes are categorized by the State into four general types: Hazardous Waste, Designated Waste, Nonhazardous Waste, and Inert Waste. Currently only certain Designated wastes and all Nonhazardous Waste can be legally disposed of on land in Ventura County. Hazardous wastes currently must be disposed of outside the County. Designated, Nonhazardous, and Inert solid waste disposal sites are operated pursuant to requirements and criteria established by the State Water Resources Control Board (SWRCB) and the California Integrated Waste Management Board (CIWMB) as well as many other agencies. They are regulated and inspected by the staff of the Regional Water Quality Control Board (RWQCB), and the Ventura County Environmental Health Division, which is the Local Enforcement Agency (LEA). Figure 4.4.1 is a map showing the location of the solid waste disposal sites. Permitted solid waste disposal sites are located as follows:

4.4.3.1 Bailard Landfill

The Bailard Landfill was reopened as a municipal waste landfill in 1989. This landfill was formerly operated by Robinson Services on leased land. The 160 acre operational portion of the Bailard Landfill Site has an estimated capacity of 6.7 million cubic yards and is intended to be used as a municipal waste site for disposal of Nonhazardous and Inert wastes. The site is located adjacent to and south of the Santa Clara River, approximately 1,500 feet west of the Victoria Avenue Bridge, in the unincorporated area of the County. The site will serve the western waste shed area including Oxnard, Port Hueneme, Ventura, the Ojai Valley, Camarillo and the North and South Coast communities. The permitted site life is five years of active landfill operations or December 1993, whichever occurs first. However, VRSD has applied for a time extension with a estimated increase in capacity to 7.3 million cubic yards for the site. When the site is closed, it may be used for recreational purposes or converted to open space.

4.4.3.2 Beardsley Landfill

The City of Camarillo owns a 20 acre site located at Mariano and Beardsley Roads in Camarillo. The facility was only permitted for disposal of Inert wastes, including street cleanings and debris from road construction and repair work. The site has not, however, been used for landfilling and the Regional Water Quality Control Board has indicated that the Waste Discharge Requirements (WDR's) for that site will be rescinded. Consequently, the site cannot become operational without the acquisition of new permits from regulatory authorities.

4.4.3.3 Coastal Landfill

This 83 acre municipal waste site (closed 1989) is an extension of the old Santa Clara Site. It is located near Gonzales Road in the City of Oxnard, approximately 500 feet east of its intersection with Victoria Avenue, adjacent to and south of the Santa Clara River. This site is owned by VRSD.

4.4.3.4 Simi Landfill Site

On January 9, 1983, Waste Management, Inc., purchased and initiated operations at the Simi Landfill site. The 233 acre Simi site is operated under Solid Waste Facility Permit 56-AA-007 and Conditional Use Permit 3142 both issued by Ventura County. It is located at 111 West Los Angeles Avenue, north of the Simi Valley Freeway approximately ½ mile west of Madera Road in the unincorporated area of Ventura County. Simi is designated a Class III landfill, which takes non-hazardous wastes and inert wastes. In addition, sewage sludge cake (nonhazardous waste) from various treatment plant operations are accepted.

The total waste handled in 1987 was approximately 411,000 tons. This site serves Simi Valley, Moorpark, Thousand Oaks, Oak Park and parts of Los Angeles County. The Simi landfill is expected to reach capacity soon. However, the site operators have applied to expand the site, which would increase the waste disposal site life by up to an additional 25 years.

4.4.3.5 Texaco Sites A and B

Texaco Site A is a 3 acre land farm with a total estimated capacity of 4,840 cubic yards. This site is located in School Canyon north of the City of Ventura and handles a maximum of 30 tons of non-hazardous oil field wastes per operating day. Site B is a 30 acre land farm located on Hall Canyon Road. This site handles an average of 37 tons of non-hazardous oil field waste a day. The site capacity is estimated at 48,400 cubic yards with a site life of 54 years. Both sites are operated under a Solid Waste Facility Permit and a Conditional Use Permit issued by the County of Ventura. These sites are privately operated Class II disposal facilities on leased land.

These sites can operate seven days per week during daylight hours. The types of waste received are tank bottom sediments, drilling muds and cuttings, diatomaceous earth, work over and redrilling materials, and other non-hazardous oil field wastes. The composite of these materials have been declared non-hazardous by the California Department of Health Services.

4.4.3.6 Texaco Landfill Site C

This site is a small, 5 acre, private municipal waste landfill, located in Hall Canyon, approximately two and one half miles east of the intersection of School Canyon Road and Ventura Avenue (at the terminus of School Canyon Road) near the City of Ventura. The capacity of this site is estimated to be approximately 20,260 cubic yards. The property owner presently leases this site to the landfill operator, which is the Texaco Producing, Inc. This site takes only Group 3 wastes (such as wood, metal, rubber, earth, plastics, rock, and concrete) generated from Texaco operations. The site is expected to continue operating well into the future, due to the small amount of waste deposited. Texaco Landfill receives 108 tons of waste per year. This site operates under solid waste facility permit issued in 1979, and has an expected life of 50 years. Texaco has applied for a Conditional Use Permit to reflect expanded operations at the project site.

4.4.3.7 Toland Road Landfill

The 161 acre Toland Road site is owned by VRSD and is located at 3500 North Toland Road, is at the northerly terminus of the road. The site is three miles west of Fillmore and three and one half miles northeast of the City of Santa Paula. This is a municipal waste site. It serves the communities of Fillmore, Santa Paula, and Piru. The Toland Road site is operated under a Conditional Use Permit #3141 and a Solid Waste Facility Permit. The site receives non-hazardous waste including empty, triple rinsed pesticide containers and dry sewage sludge cake. The total waste handled at the site in 1989 was approximately 40,000 tons. Life expectancy for the Toland Road site is estimated at approximately 50 years at the present waste generation rate, with an estimated remaining capacity of 5 million cubic yards of waste.

4.4.4 OFF-SITE WASTE TREATMENT FACILITIES

Off-site waste treatment facilities are those facilities which accept wastes from outside their permit boundaries for treatment to change the physical, chemical, or biological characteristics of the waste so as to render it less harmful to the quality of the waters of the State, safer to handle, easier to contain or manage, including use as a fuel, nutrient or soil amendment.

Five existing off-site nonhazardous waste treatment sites currently (1991) handle liquid wastes. The majority of the liquid industrial waste handled at the five sites is nonhazardous oil field waste. Different phases of oil production yield different types of oil field waste. Types and sources of oil field waste include: drilling muds and cuttings from drilling operations; tank bottoms and produced water from oil separation operations; scrubber sludge from gas cleaning operations; diatomaceous earth, slop oil, residual oil, and wastewaters from water cleaning operations; oil contaminants; and any other waste products from oil/gas development and production

The facilities, and the wastes they currently accept for processing, are noted below:

4.4.4.1 Bush Oil Field Brine Processing Facility

Bush Oil Company McGrath Five Tank Farm, located at Harbor and Gonzales is solely used for oil field brines produced by Bush Oil Company operations. Oil and sulfide is removed from the brine prior to discharge to the Oxnard Wastewater Treatment Plant.

4.4.4.2 Liquid Waste Treatment Facility No. 1 (Montalvo)

The Liquid Waste Treatment Facility No. 1 (LWTF) operated by Ventura Regional Sanitation District (VRSD) is located in Montalvo, and handles wastes which are unsuitable for direct disposal into the sewage system without pretreatment. LWTF accepts wastewater from septic tanks, agricultural waste, water softener brines, compatible industrial wastes and oil field brines. Treatment required for brine waters prior to discharge consists of chlorination by the Purifax process to reduce the biological oxygen demand (BOD).

Liquid oil field waste makes up approximately five percent of the waste stream treated at this facility daily. The facility is presently operating close to capacity. Treated water is discharged by pipeline to the Oxnard Wastewater Treatment Plant and 1,400 tons of dried sludge per year is disposed at the Simi Valley Landfill.

4.4.4.3 Santa Clara Wastewater Company

The privately operated Santa Clara Wastewater Company treats and disposes of brines or produced water oil field waste. This facility is located in Santa Paula. Treatment of these oil field wastes comprises 90% of the liquid waste handled at this facility. Treatment consists of oil skimming and recovery, solid liquid separation, and biological treatment by aerated lagoons. Approximate disposal rate of oil field brines is 3,000 barrels/day of the liquid waste. Treated brines are transported via a 14 mile pipeline to the Oxnard Wastewater Treatment Plant.

4.4.4.4 VenVirotek Chemfix Processing Facility

VenVirotek operates a facility for the treatment, processing, stabilization and disposal of nonhazardous drilling cuttings and sewage sludge on a six acre portion of the 180 acre Bailard Landfill site. This site is located about six-tenths of a mile northwesterly of the intersection of Victoria Avenue and Gonzales Road, west of the City of Oxnard.

4.4.4.5 Wooley Road Wastewater Disposal Facility

Shell Oil Company purchased the former Chevron-owned facility, located at Wooley Road and Mercantile Street. This facility removes oil and sulfide from the brine prior to discharge to the Oxnard Wastewater Treatment Plant.

4.4.5 WASTE TRANSFER STATIONS

Waste transfer stations are those facilities utilized to receive wastes from outside their permit boundaries to temporarily store and/or separate wastes, or transfer the solid wastes directly from smaller to larger vehicles for transport.

Transfer refers to the temporary storage of waste after it has been collected at its point of generation but before it reaches its final point of disposal. Transfer stations, also called anti-litter stations, are generally created either as localized temporary collection points as a convenience to local residents and businesses, or as a major transfer point for the reduction of waste and/or shifting waste from smaller to larger, more cost effective vehicles for the transport of wastes.

Storage refers to the temporary onsite holding of waste before it is collected for disposal. Nonhazardous waste storage is regulated by local government. The County as well as many of the cities have solid waste ordinances for regulating the storage of solid wastes.

4.4.5.1 Ojai Transfer Station (Anti-Litter)

The Ojai Transfer Station is located adjacent and north of Old Baldwin Road between Rice Road and Burnham Road, across from the County Honor Farm, and it is open two days per week. It provides litter management, brush shredding and resource recovery for the Ojai area. This facility is approximately 5.4 acres in size and handles approximately 20 tons per operating day of materials, some of which can be recycled. There are approximately 190 vehicular trips each operating day. Waste materials are disposed at district landfills. This facility is leased and operated by the VRSD under a Solid Waste Facility Permit. In April 1988, the Planning Commission approved a Conditional Use Permit to establish a redemption center (per AB 2020) at the project site. The facility has been operating as a legal non-conforming use.

4.4.6 CONCLUSIONS

Any plan for the future development of Ventura County would be incomplete if it did not contain a means of ensuring adequate waste treatment and disposal facilities to accommodate planned growth. Issues which should be addressed in the Goals, Policies, and Programs of the General Plan include means to ensure that new development will be adequately served by public sewers or individual septic disposal systems in a manner which will not adversely affect water quality. Additionally, Goals, Policies and Programs of the General Plan should ensure that there will be continuous waste disposal, treatment and transfer/storage capacity in the County and ensure that future land use decisions do not preclude development of landfill sites.

REFERENCES

CH_2M Hill & County of Ventura, Ventura County Wastewater Reuse Study Facilities Plan, December 1981.

County of Ventura Planning Division, Countywide Solid Waste Management Plan (CoSWMP), April 1985.

Montgomery, James, M., Sludge Management in Ventura County, Pasadena, July 1985.

Ventura County Board of Supervisors in cooperation with Regional Water Quality Control Board, Los Angeles, 208 Areawide Water Quality Management Plan - 1980, Vol I-IV, July 1980.

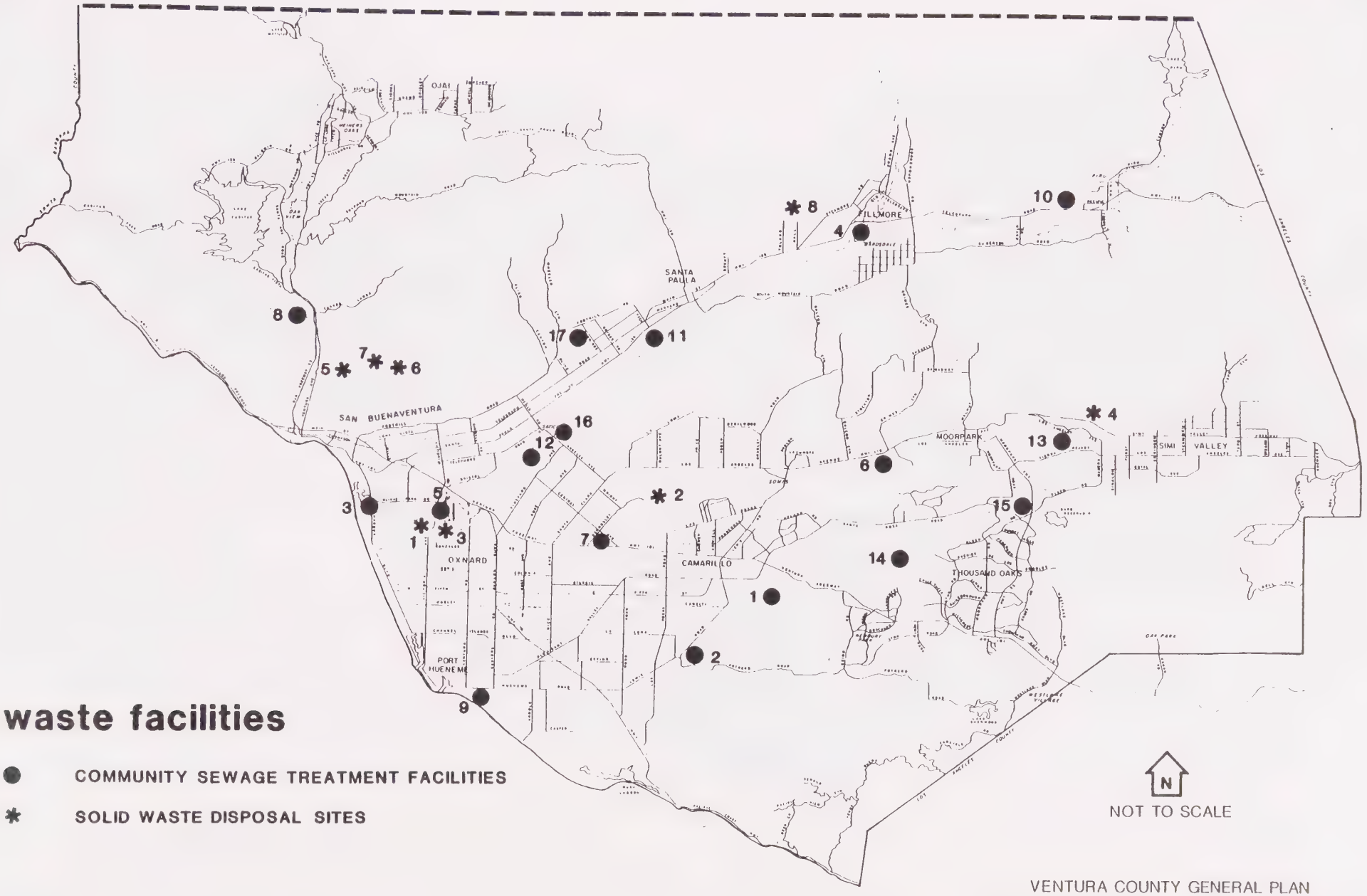
INDIVIDUALS CONSULTED

Sewage Treatment

Jim Buell, City of Simi Valley, Sewage Treatment Plant Superintendent
John Correa, County of Ventura Public Works Agency, Engineering Services
Bob Gallagher, County of Ventura Environmental Health Division
Terry Gilday, County of Ventura Environmental Health Division
Michael Kleinbrodt, City of Simi Valley, District Engineer
Peter Kolb, City of Thousand Oaks, Utilities Department
John McLaughlin, County of Ventura Environmental Health Division
Tim Nanson, City of Oxnard, Public Works Department
Eric Oltman, Ojai Valley Sanitary District Wastewater Treatment Plant
Kelly Polk, Ventura Regional Sanitation District
Dan Rayburn, City of Ventura Sanitation District
Chuck Rogers, Ventura Regional Sanitation District
Bill Ruff, Tapia Wastewater Treatment Plant Superintendent
Bill Stratton, County of Ventura Environmental Health Division
Norm Wilkinson, City of Santa Paula, Public Works Director

Solid Waste

Harsha V. Kondru, Ventura Regional Sanitation District
Christy Madden, County of Ventura Solid Waste Division
Kay Martin, County of Ventura Solid Waste Division



SOURCE: VENTURA COUNTY PLANNING DIVISION

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX FIGURE 4.4.1
R.7/12/94

WASTE FACILITIES MAP (FIG. 4.4.1) LEGEND

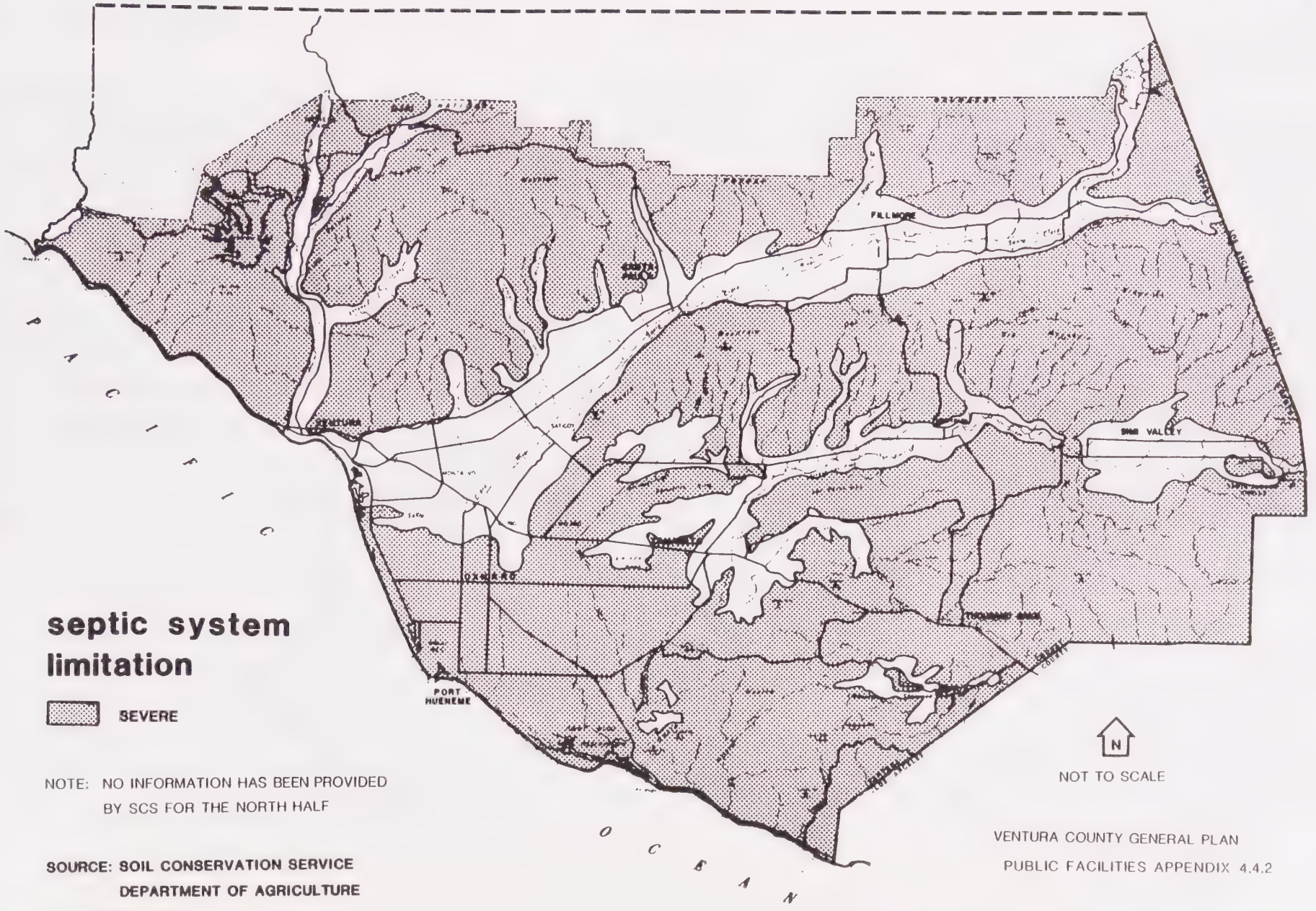
● **COMMUNITY SEWAGE TREATMENT FACILITIES**

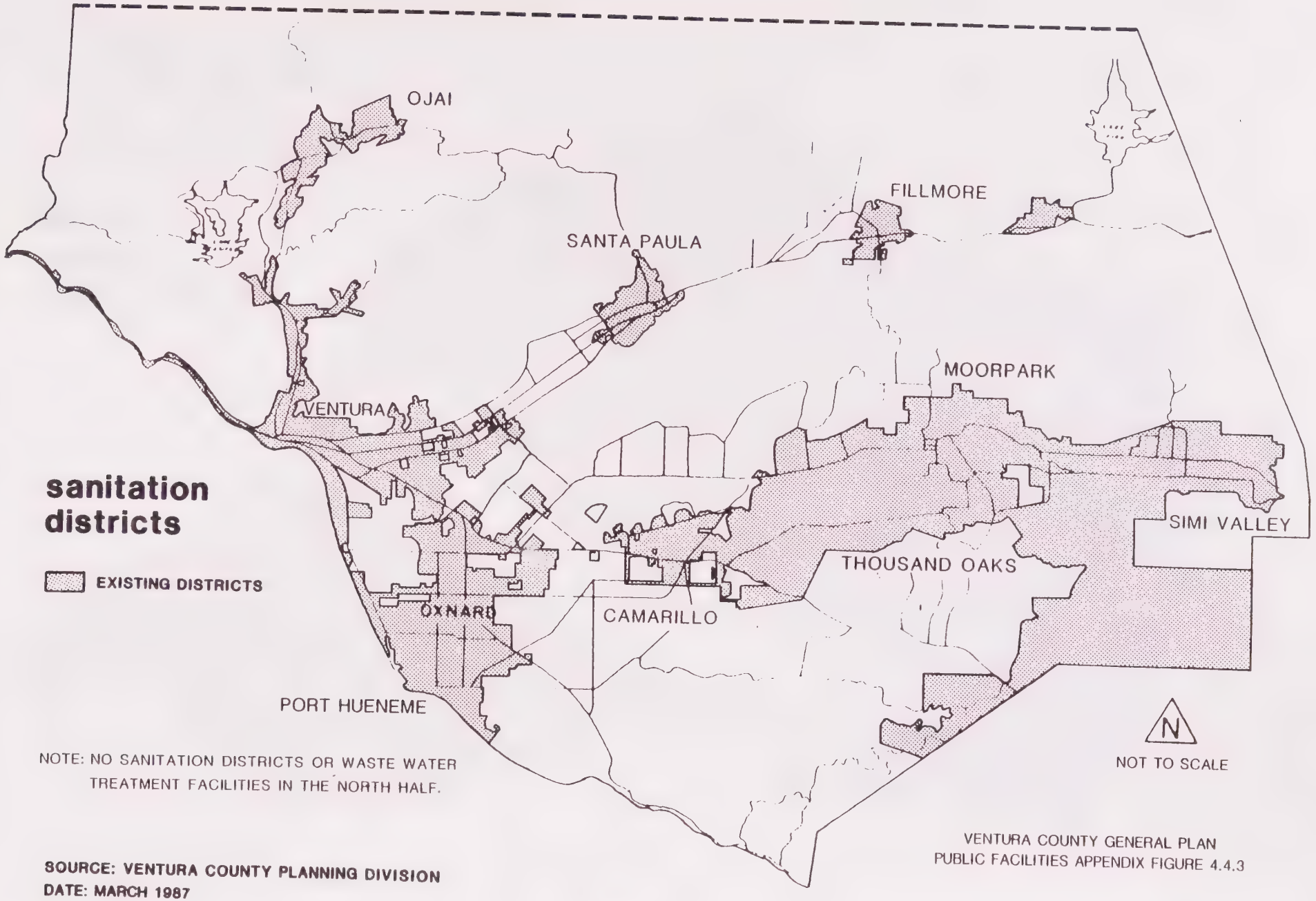
1. Camarillo Sanitary District Water Reclamation Plant
2. Camrosa Wastewater Treatment Plant
3. Ventura Water Renovation Facility
4. Fillmore Wastewater Treatment Plant
5. Montalvo Municipal Improvement District Treatment Facility
6. Moorpark Wastewater Treatment Plant
7. Nyeland Acres Wastewater Treatment Plant
8. Ojai Valley Sanitary District Wastewater Treatment Plant
9. Oxnard Wastewater Treatment Plant
10. Piru (Waterworks District No. 16) Wastewater Treatment Plant
11. Santa Paula Wastewater Treatment Plant
12. Saticoy Sanitary District Wastewater Treatment Plant
13. Simi Valley Co. Sanitation District Water Quality Control Plant
14. Thousand Oaks - Hill Canyon Wastewater Treatment Plant
15. Thousand Oaks - Olsen Road Water Reclamation Plant
16. Saticoy - Potential Sewage Treatment Facility
17. Limoneira Wastewater Treatment Plant

✱ **SOLID WASTE DISPOSAL SITES**

1. Bailard Landfill
2. Beardsley Landfill
3. Coastal Landfill
4. Simi Valley Landfill
5. Texaco Site "A" (Oilfield Waste - School Canyon)
6. Texaco Site "B" (Oilfield Waste - Hall Canyon)
7. Texaco Site "C" (Refuse - Hall Canyon)
8. Toland Road Landfill

R. 7/12/94


PACIFIC
OCEAN
PORT HUENEME
OXNARD
FILLMORE
SIMI VALLEY
septic system limitation
SEVERE
NOTE: NO INFORMATION HAS BEEN PROVIDED BY SCS FOR THE NORTH HALF
SOURCE: SOIL CONSERVATION SERVICE DEPARTMENT OF AGRICULTURE
DATE: APRIL 1970
N
NOT TO SCALE
VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX 4.4.2



sanitation districts

EXISTING DISTRICTS

NOTE: NO SANITATION DISTRICTS OR WASTE WATER TREATMENT FACILITIES IN THE NORTH HALF.

NOT TO SCALE

SOURCE: VENTURA COUNTY PLANNING DIVISION
DATE: MARCH 1987

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX FIGURE 4.4.3

FIGURE 4.4.4

POPULATION BY SEWER SERVICE AREA

Sanitation District	1980	1985	1990	1995	2000	2005	2010
Camarillo Sanitary District	30,150	33,387	38,086	40,266	42,297	45,269	48,348
Camrosa County Water District	9,852	13,546	18,437	23,422	28,110	30,915	33,494
County Service Area No. 30 (Nyeland Acres)	1,307	1,320	1,381	1,440	1,503	1,568	1,627
County Waterworks District No. 1 (Moorpark)	9,362	15,315	23,919	30,328	36,346	42,226	47,558
County Waterworks District No. 16 (Piru)	1,368	1,400	1,810	1,980	2,150	2,300	2,440
Fillmore Sanitary District	9,604	10,300	12,230	13,310	14,260	15,220	16,170
Montalvo Municipal Improvement District	3,075	3,238	3,337	3,439	3,549	3,651	3,772
Ojai Valley Sanitary District	22,867	24,203	25,370	26,114	26,782	27,524	28,213
Oxnard Sewer Services (Includes Port Hueneme)	141,115	149,209	167,255	182,725	204,700	223,692	244,412
Santa Paula Sanitary District	20,889	22,320	24,500	26,000	27,500	29,000	30,500
Saticoy Sanitary District	1,502	1,519	1,675	1,842	1,995	2,149	2,311
Simi Valley County Sanitary District	80,180	90,525	103,094	112,548	121,022	129,060	136,761
City of Thousand Oaks							
a. Hill Canyon Plant	81,873	91,214	96,162	102,700	109,300	115,600	122,200
b. Olsen Road Plant	1,910	2,393	2,559	2,600	2,650	2,700	2,750
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood, and Bell Canyon)	14,362	16,533	27,912	35,296	37,610	39,504	41,211
Ventura Sanitary District	76,415	83,131	85,477	93,824	102,246	107,662	113,407

Source: Ventura County Planning Division, 1987

FIGURE 4.4.5

INDUSTRIAL ACREAGE BY SEWER SERVICE AREA

Sanitation District	1980	1985	1990	1995	2000	2005	2010
Camarillo Sanitary District	198	286	372	460	546	633	720
Camrosa County Water District	20	77	135	194	250	308	365
County Service Area No. 30 (Nyeland Acres)	0	2	3	5	6	8	9
County Waterworks District No. 1 (Moorpark)	40	105	169	235	297	362	426
County Waterworks District No. 16 (Piru)	21	29	37	45	52	60	68
Fillmore Sanitary District	70	113	154	197	239	281	323
Montalvo Municipal Improvement District	3	3	3	3	3	3	3
Ojai Valley Sanitary District	69	95	120	147	173	198	224
Oxnard Sewer Services (Includes Port Hueneme)	719	1,109	1,494	1,885	2,271	2,657	3,046
Santa Paula Sanitary District	239	269	302	331	360	394	423
Saticoy Sanitary District	46	46	46	46	46	46	46
Simi Valley County Sanitary District	147	383	619	858	1,091	1,329	1,563
City of Thousand Oaks							
a. Hill Canyon Plant	228	306	380	458	531	608	683
b. Olsen Road Plant	0	0	0	0	0	0	0
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	58	84	111	137	162	190	215
Ventura Sanitary District	234	400	564	732	897	1,062	1,227

Source: Ventura County Planning Division, 1987

FIGURE 4.4.6

SEWAGE TREATMENT PLANT LOADING FACTORS

Sanitation District	Domestic/Commercial*		Industrial**	
	1980 Plan	Proposed	1980 Plan	Proposed
Camarillo Sanitary District	80	93	822	1,399
Camrosa County Water District	100	70	N/A	6
CSA No. 30 (Nyeland Acres)	72	95	0	500
County Waterworks District No. 1 (Moorpark)	79	88	1,070	1,070
County Waterworks District No. 16 (Piru)	82	63	234	517
Fillmore Sanitary District	91	101	1,072	885
Montalvo Municipal Improvement District	68	69	N/A	3,333
Ojai Valley Sanitary District	78	78	984	984
Oxnard Sewer Services	98	102	2,250	3,427
Santa Paula Sanitary District	88	90	645	372
Saticoy Sanitary District	77	149	960	217
Simi Valley County Sanitary District	82	87	305	2,285
City of Thousand Oaks				
a. Hill Canyon Plant	100	85	1,688	2,500
b. Olsen Road Plant	89	100	0	0
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	104	100	0	1,030
Ventura Sanitary District	98	98	654	654

*Gallons per capita per day (gpcd)
**Gallons per acre per day (gpad)
N/A = Not Applicable

Source: Based on estimates of current average influent flow volumes, divided by 1985 population and industrial acreage estimates. Where current flow volumes not available, 1980, "208" Plan loading factors were used.

FIGURE 4.4.7

FLOW FROM DOMESTIC/COMMERCIAL USES

(All Figures in 1,000 Gallons Per Day)

Sanitation District	1980	1985	1990	1995	2000	2005	2010
Camarillo Sanitary District	2,804	3,100	3,542	3,745	3,934	4,210	4,496
Camrosa County Water District	689	950	1,291	1,640	1,968	2,164	2,345
CSA No. 30 (Nyeland Acres)	124	125	131	137	143	149	155
County Waterworks District No. 1 (Moorpark)	825	1,348	2,105	2,669	3,198	3,716	4,185
County Waterworks District No. 16 (Piru)	86	88	114	125	136	145	154
Fillmore Sanitary District	970	1,040	1,235	1,344	1,440	1,537	1,633
Montalvo Municipal Improvement District	212	222	230	237	245	252	260
Ojai Valley Sanitary District	1,784	1,888	1,979	2,037	2,089	2,147	2,201
Oxnard Sewer Services	14,394	15,200	17,060	18,638	20,879	22,817	24,930
Santa Paula Sanitary District	1,880	2,010	2,205	2,340	2,475	2,610	2,745
Saticoy Sanitary District	224	227	250	274	297	320	344
Simi Valley County Sanitary District	6,976	7,875	8,850	9,650	10,529	11,228	12,100
City of Thousand Oaks							
a. Hill Canyon Plant	8,105	9,000	7,771	9,125	9,602	10,040	10,562
b. Olsen Road Plant	191	240	256	260	265	270	275
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	1,436	1,653	2,791	3,530	3,761	3,950	4,121
Ventura Sanitary District	7,489	8,147	8,377	9,195	10,020	10,551	11,114

Source: Population forecast times domestic/commercial loading factor. For 1985, actual flow estimates are shown (where available).

FIGURE 4.4.8

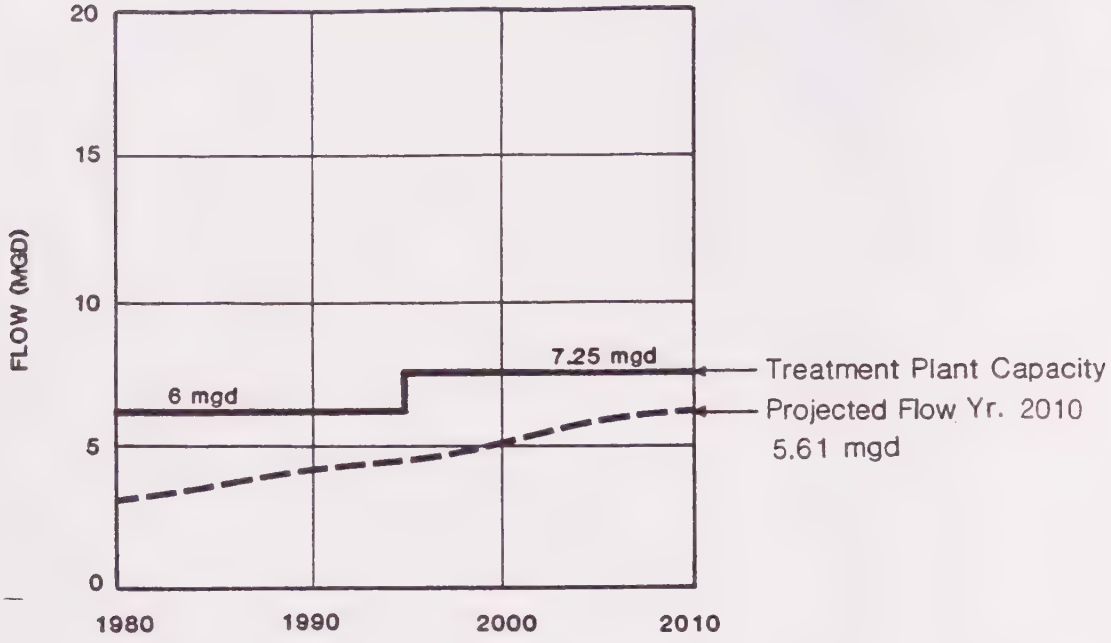
FLOW FROM INDUSTRIAL USES

(All Figures in 1,000 Gallons Per Day)

Sanitation District	1980	1985	1990	1995	2000	2005	2010
Camarillo Sanitary District	277	400	520	644	764	886	1,007
Camrosa County Water District	0.12	0.50	0.81	1.15	1.50	1.85	2.19
CSA No. 30 (Nyeland Acres)	0	1.00	1.50	2.50	3.00	4.00	4.50
County Waterworks District No. 1 (Moorpark)	43	112	181	251	318	387	456
County Waterworks District No. 16 (Piru)	11	15	19	23	27	31	35
Fillmore Sanitary District	62	100	136	174	212	249	286
Montalvo Municipal Improvement District	10	10	10	10	10	10	10
Ojai Valley Sanitary District	68	93	118	145	170	195	220
Oxnard Sewer Services	2,464	3,800	5,120	6,460	7,783	9,106	10,439
Santa Paula Sanitary District	89	100	112	123	134	147	157
Saticoy Sanitary District	10	10	10	10	10	10	10
Simi Valley County Sanitary District	336	350	450	550	650	700	800
City of Thousand Oaks							
a. Hill Canyon Plant	570	765	950	1,145	1,328	1,520	1,708
b. Olsen Road Plant	0	0	0	0	0	0	0
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	60	87	114	141	167	196	221
Ventura Sanitary District	153	262	369	479	587	695	802

Source: Industrial acreage forecast times industrial loading factor. For 1985, actual flow estimates are shown (where estimates are available).

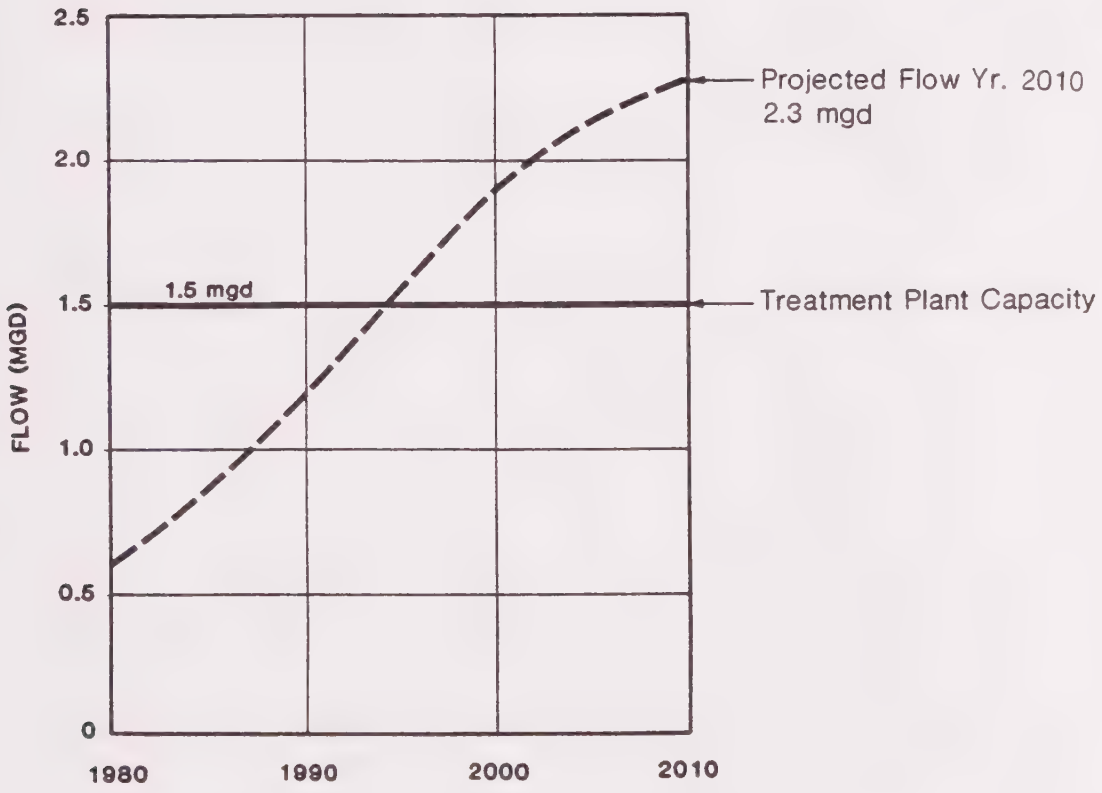
SEWAGE TREATMENT PLANT STAGING



CAMARILLO SANITARY DISTRICT WATER RECLAMATION PLANT

FIGURE 4.4.10

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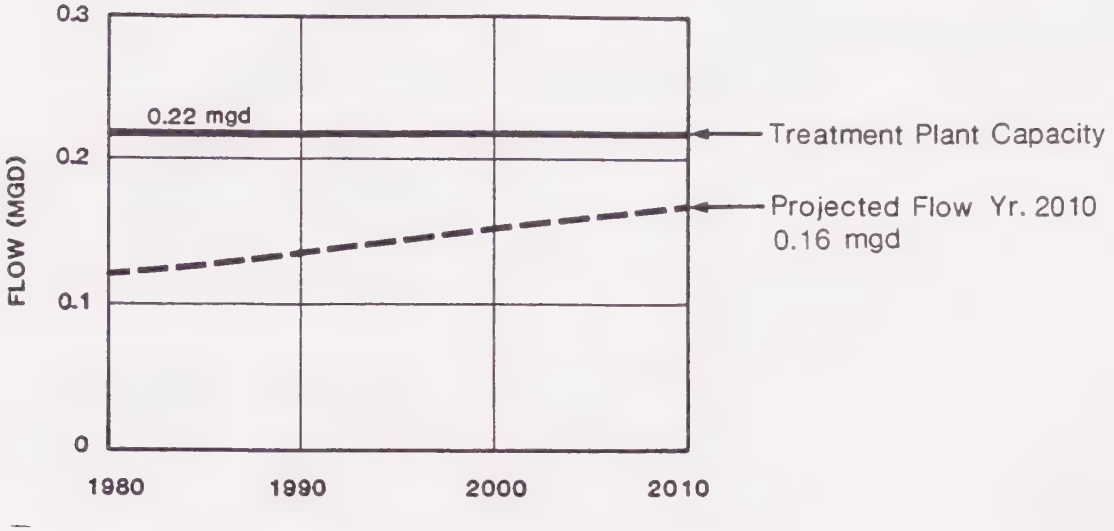


CAMROSA WASTEWATER TREATMENT PLANT
(CAMROSA COUNTY WATER DISTRICT)

FIGURE 4.4.11

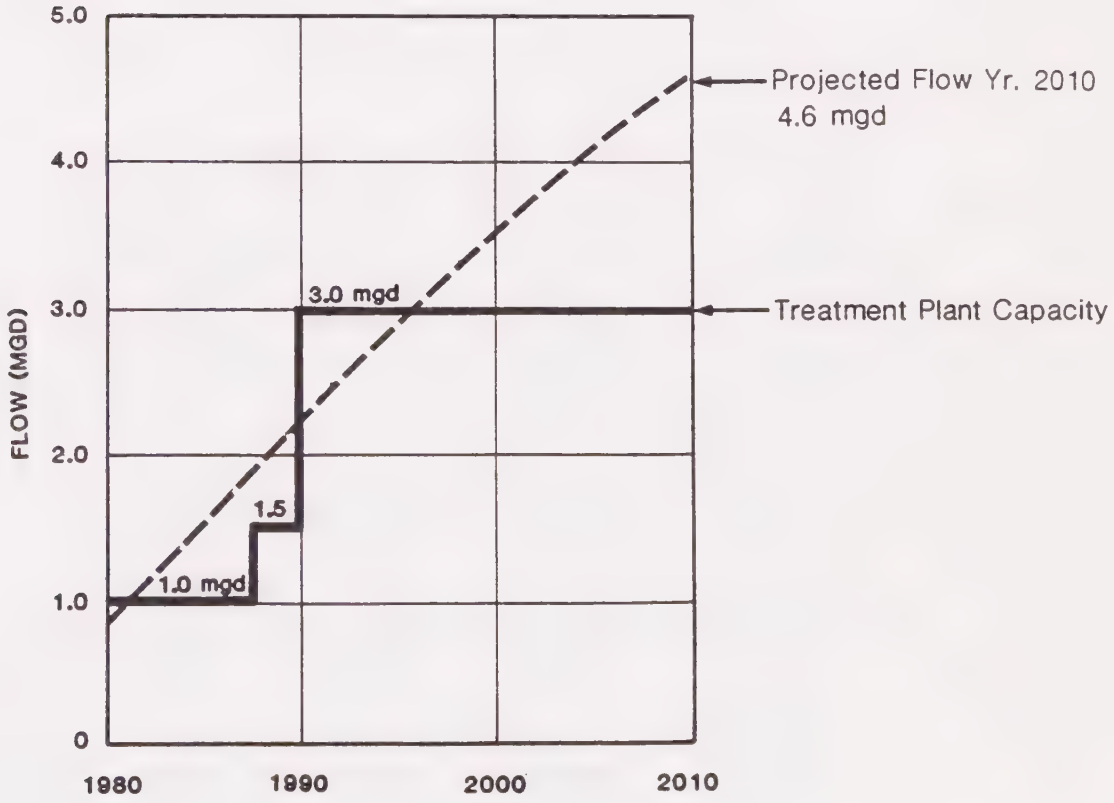
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SEWAGE TREATMENT PLANT STAGING



NYELAND ACRES WASTEWATER TREATMENT PLANT
(COUNTY SERVICE AREA NO. 30)

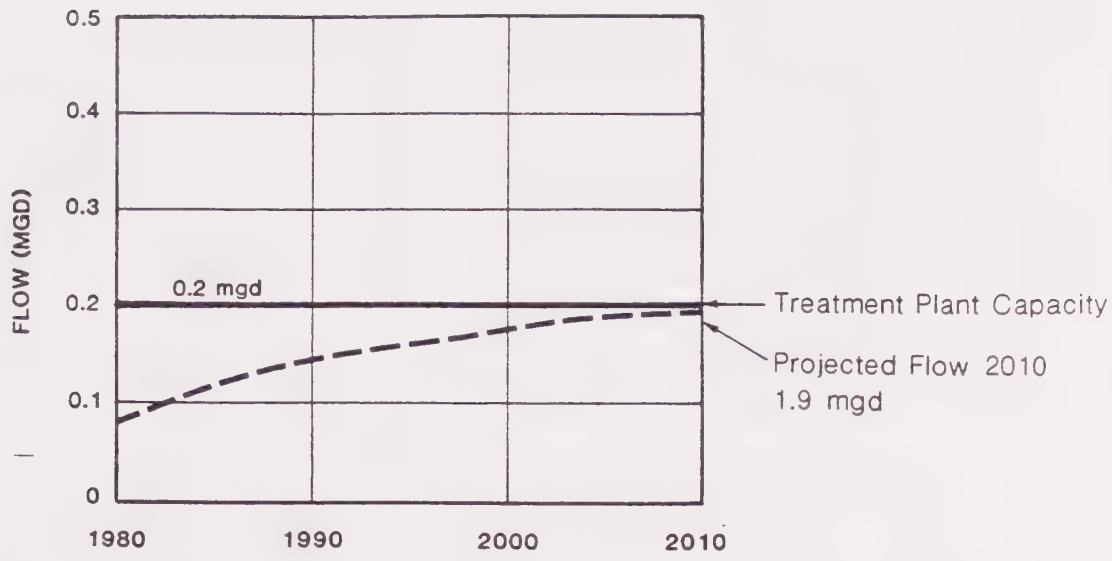
FIGURE 4.4.12
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MOORPARK WASTEWATER TREATMENT PLANT
(COUNTY WATERWORKS DISTRICT NO. 1)

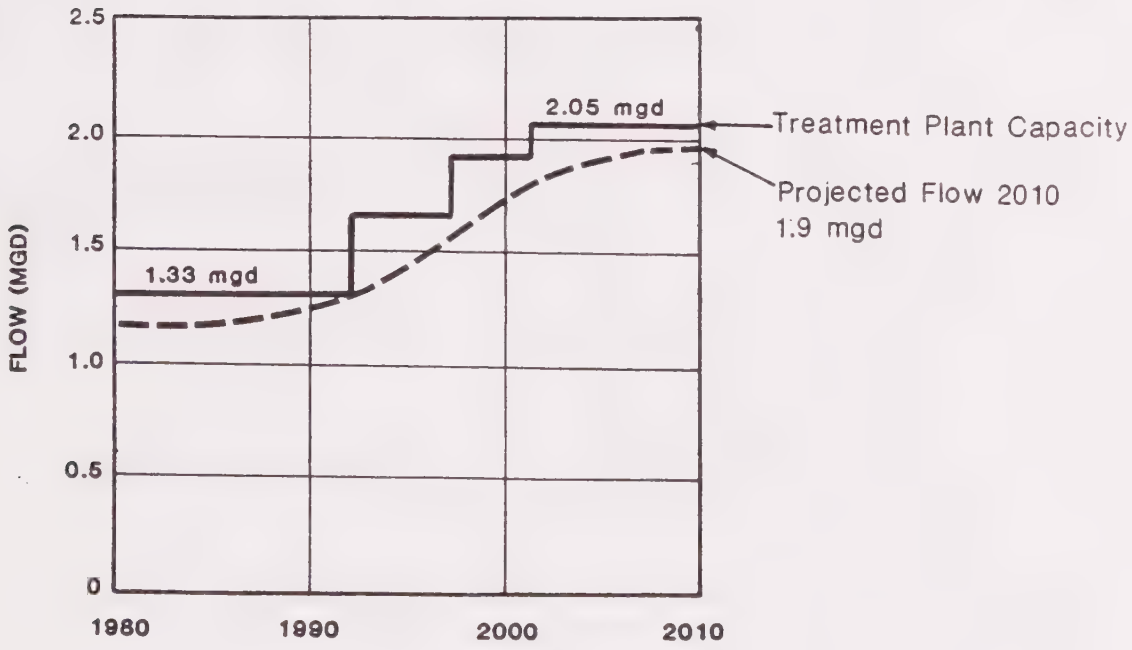
FIGURE 4.4.13
R.7/12/94

SEWAGE TREATMENT PLANT STAGING



PIRU WASTEWATER TREATMENT PLANT
(COUNTY WATERWORKS DISTRICT NO. 16)

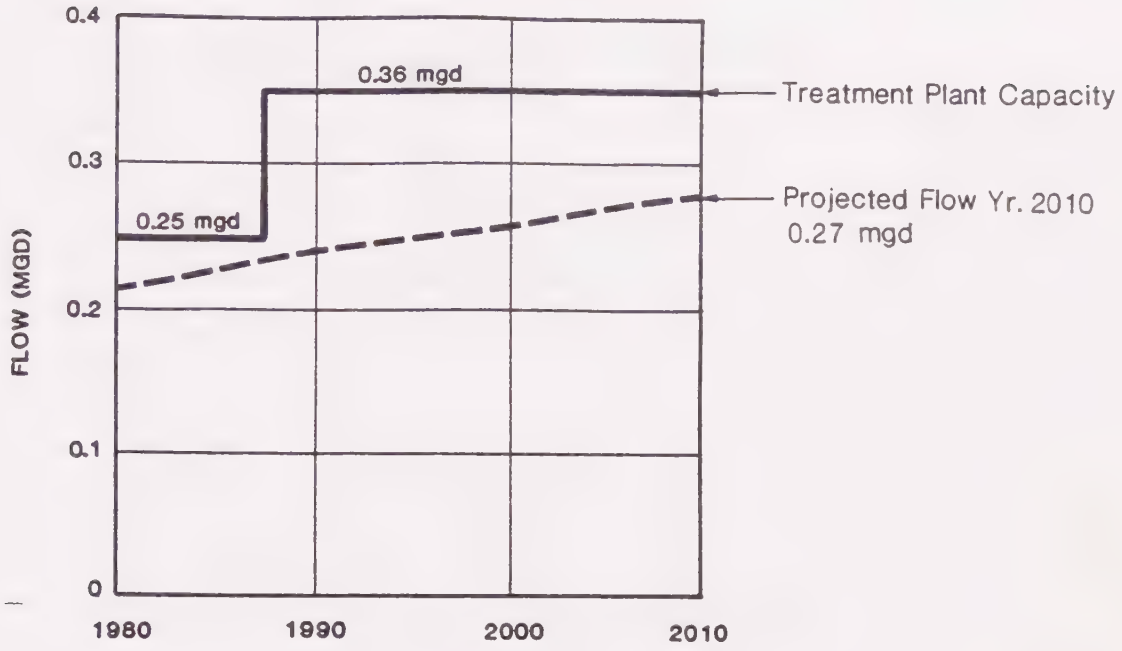
FIGURE 4.4.14
R.7/12/94



FILLMORE WASTEWATER TREATMENT PLANT
(FILLMORE SANITARY DISTRICT)

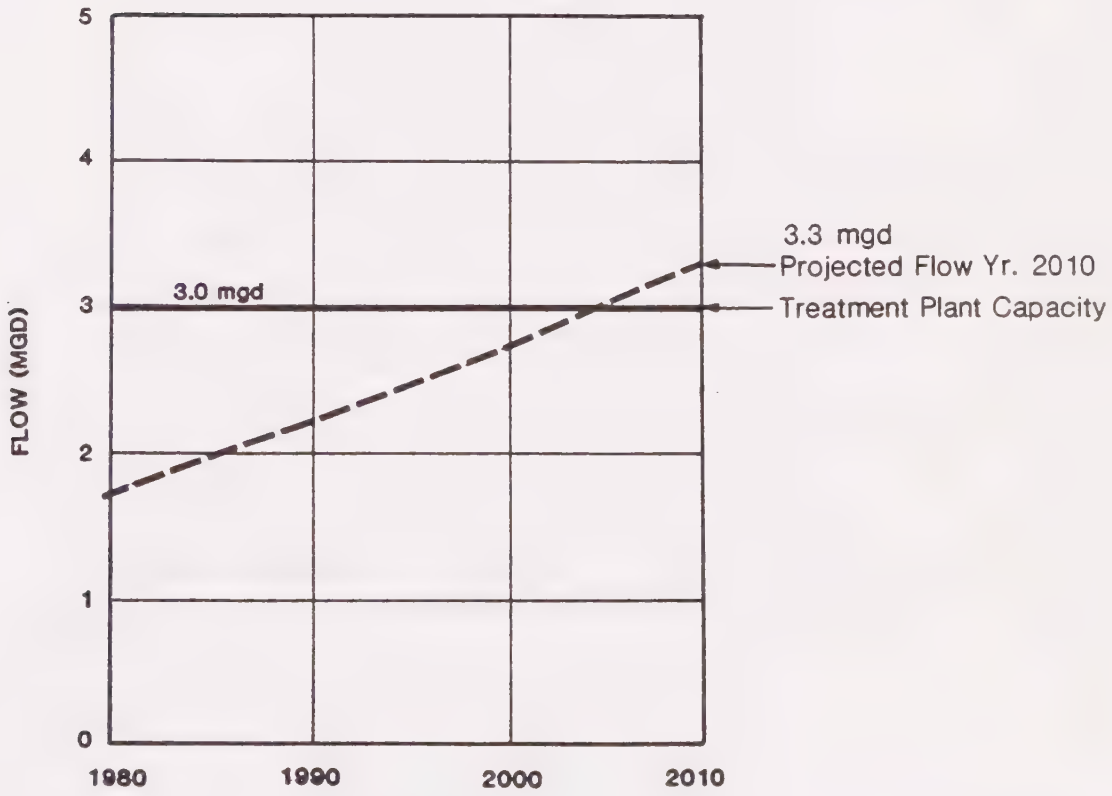
FIGURE 4.4.15
R.7/12/94

SEWAGE TREATMENT PLANT STAGING



MONTALVO MUNICIPAL IMPROVEMENT DISTRICT
TREATMENT FACILITY

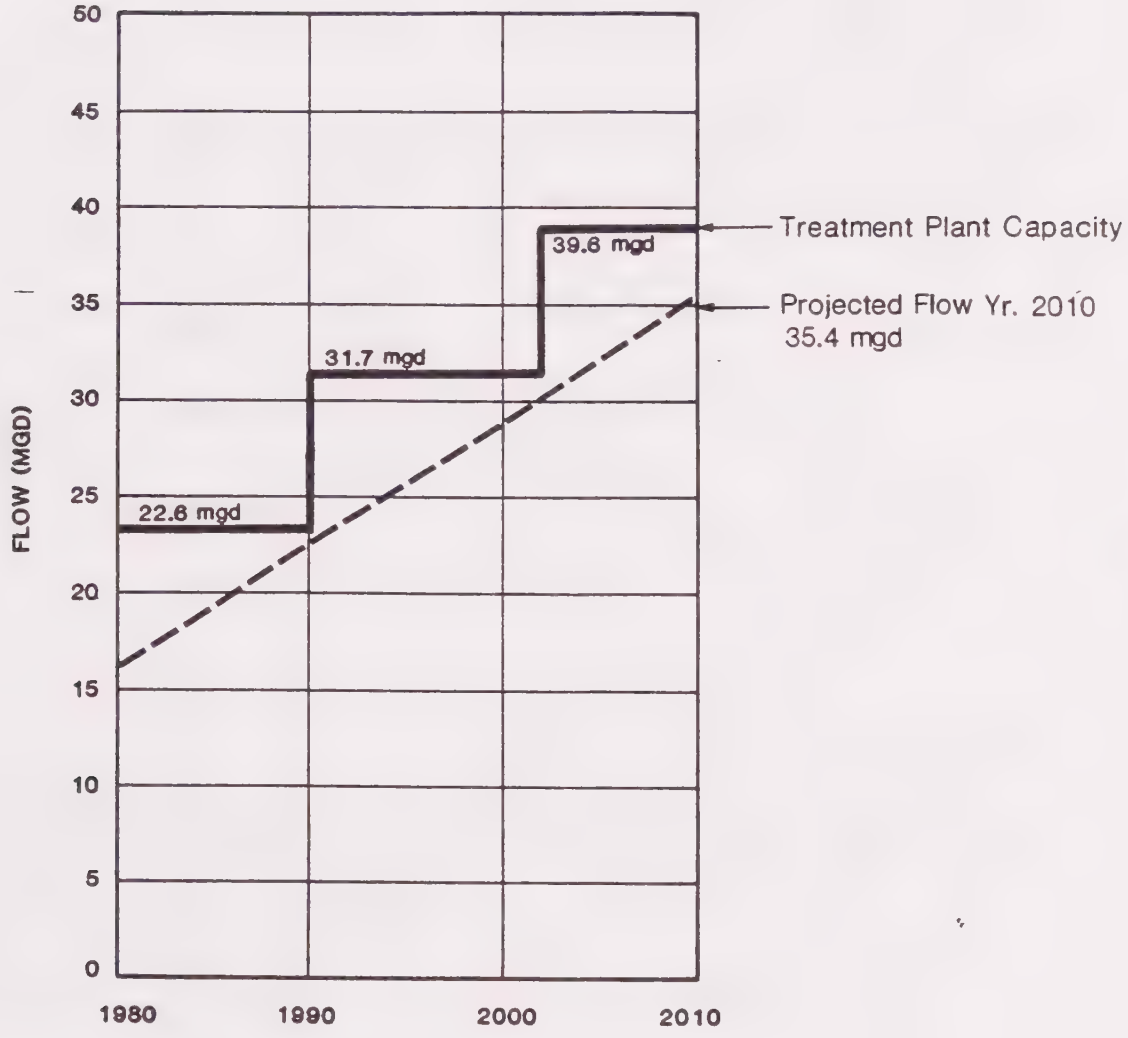
FIGURE 4.4.16
R.7/12/94



OJAI VALLEY SANITARY DISTRICT WASTEWATER
TREATMENT PLANT

FIGURE 4.4.17
R.7/12/94

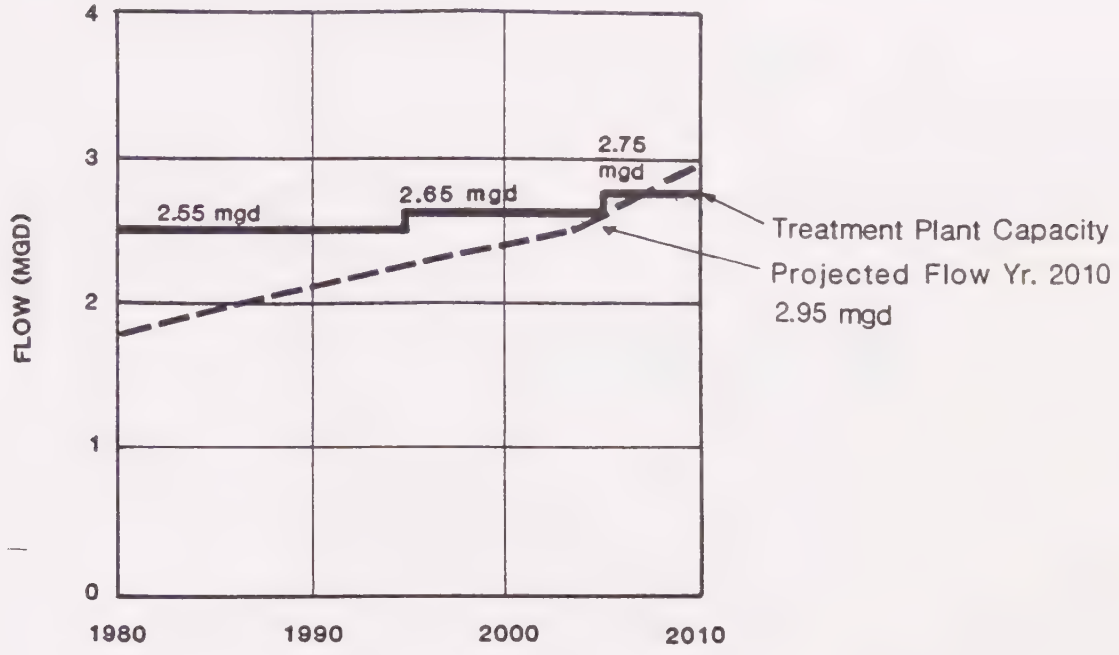
SEWAGE TREATMENT PLANT STAGING



CITY OF OXNARD WASTEWATER TREATMENT FACILITY
(OXNARD SEWER SERVICES INCLUDES THE CITY OF PORT HUENEME)

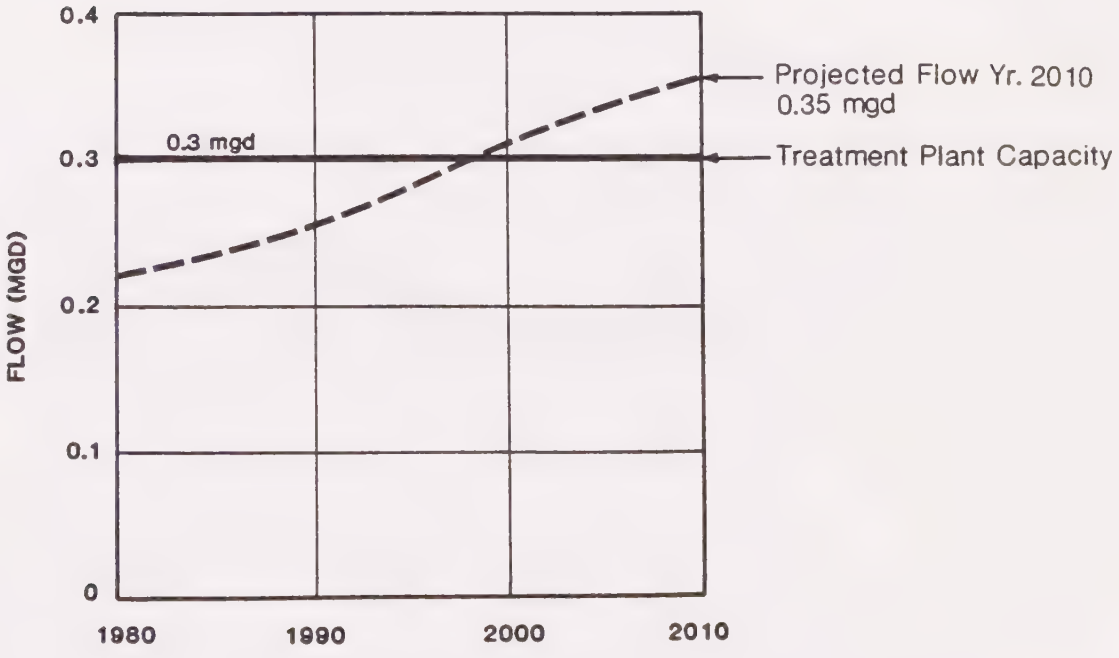
FIGURE 4.4.18
R.7/12/94

SEWAGE TREATMENT PLANT STAGING



CITY OF SANTA PAULA WASTEWATER TREATMENT PLANT
(SANTA PAULA SANITARY DISTRICT)

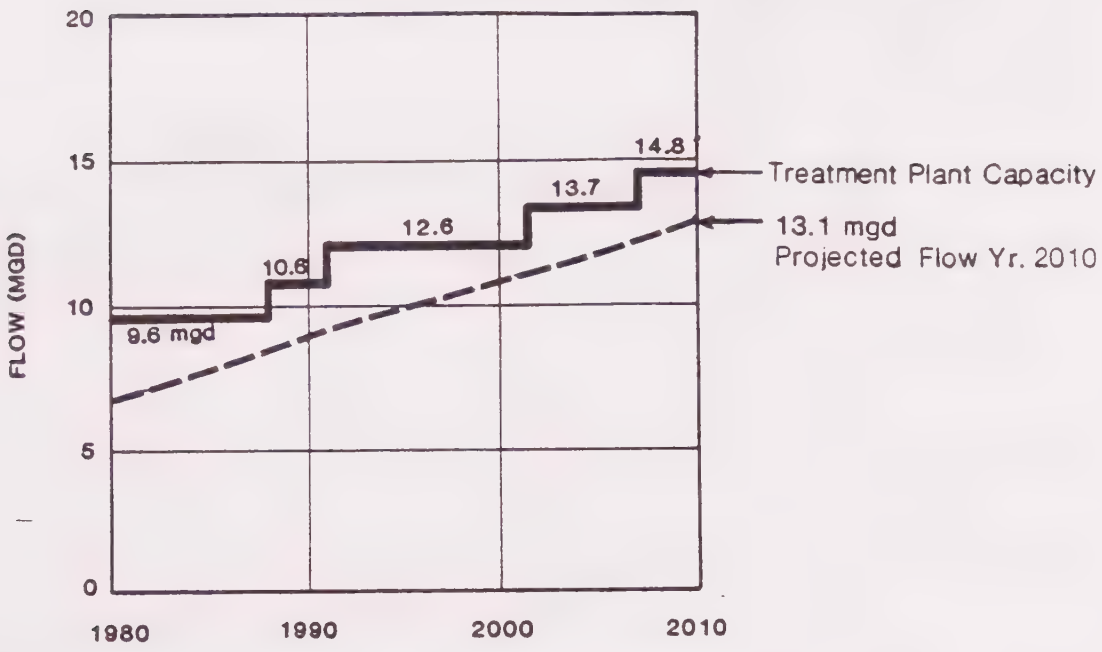
FIGURE 4.4.19
R.7/12/94



SATICOY SANITARY DISTRICT WASTEWATER
TREATMENT PLANT

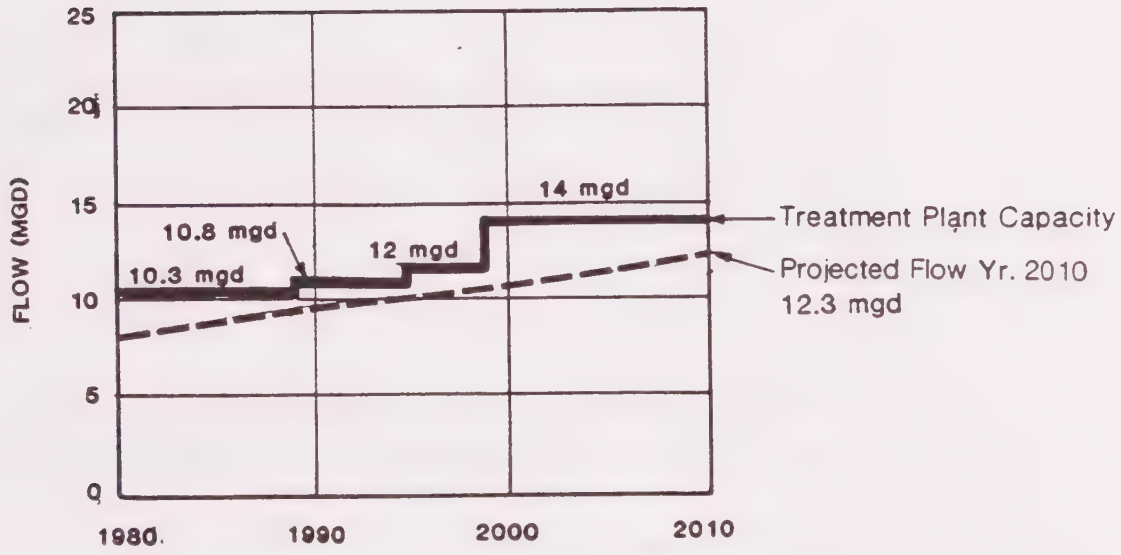
FIGURE 4.4.20
R.7/12/94

SEWAGE TREATMENT PLANT STAGING



SIMI VALLEY COUNTY SANITATION DISTRICT
WATER QUALITY CONTROL PLANT

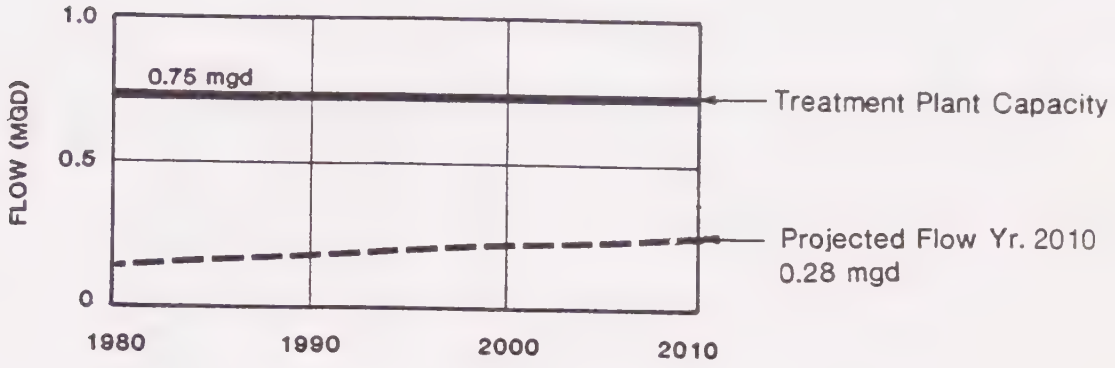
FIGURE 4.4.21
R.7/12/94



CITY OF THOUSAND OAKS-HILL CANYON WASTEWATER TREATMENT PLANT

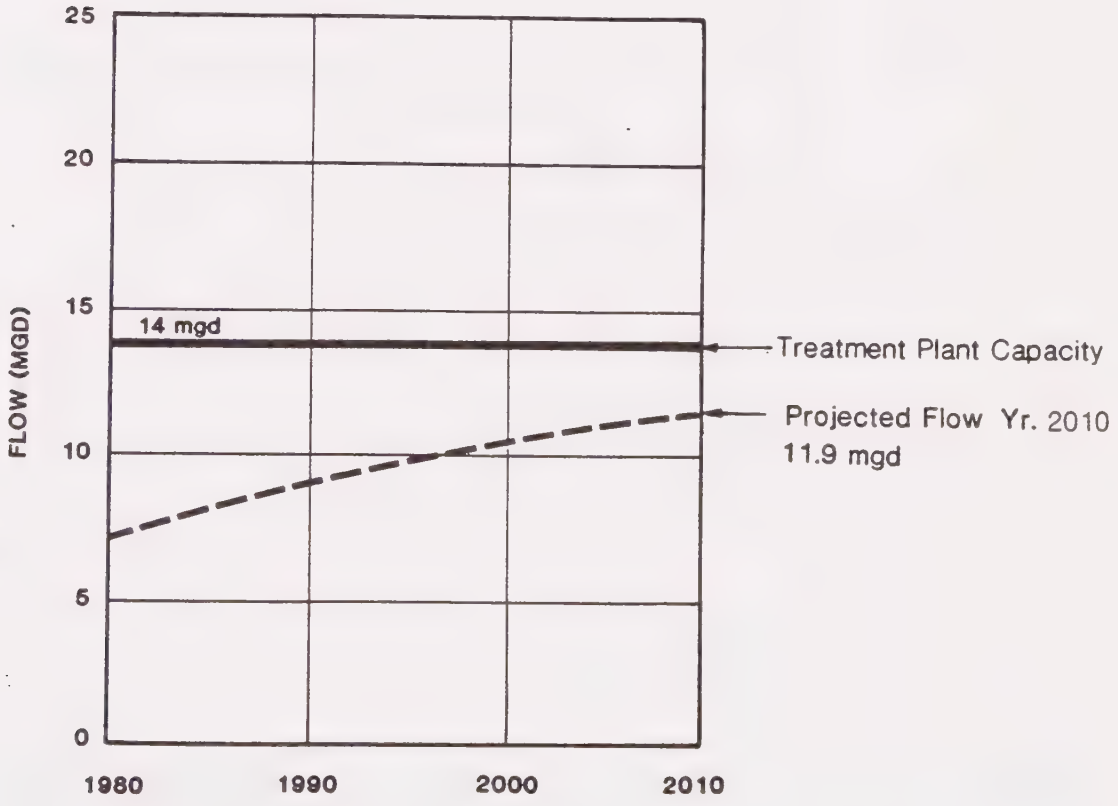
FIGURE 4.4.22
R.7/12/94

SEWAGE TREATMENT PLANT STAGING



CITY OF THOUSAND OAKS-OLSEN ROAD WATER RECLAMATION PLANT

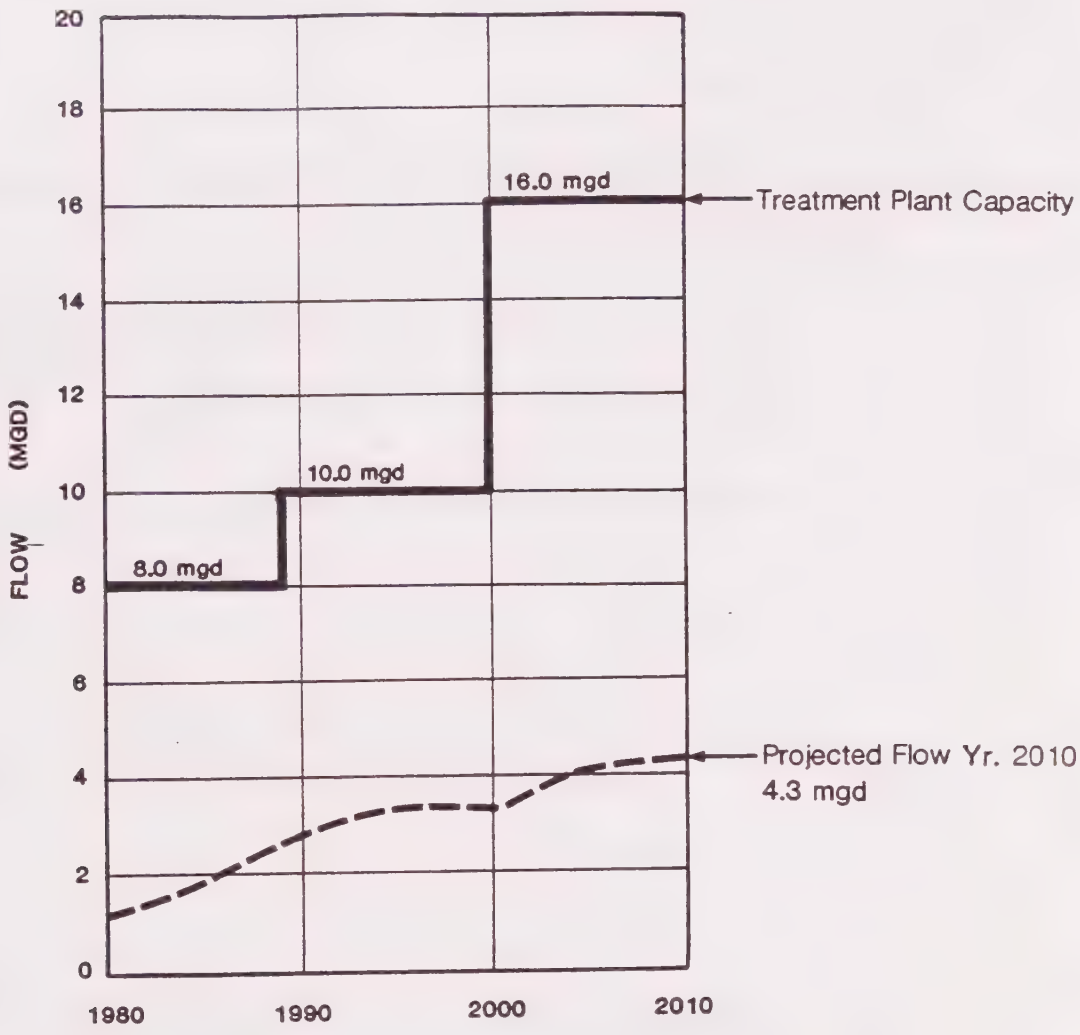
FIGURE 4.4.23
R.7/12/94



VENTURA WATER RENOVATION FACILITY
(VENTURA SANITARY DISTRICT)

FIGURE 4.4.24
R.7/12/94

SEWAGE TREATMENT PLANT STAGING



TRIUNFO COUNTY SANITATION DISTRICT

(FOR OAK PARK, NORTH RANCH, WESTLAKE AND BELL CANYON)

FIGURE 4.4.25

R.7/12/94

NOTE: Projected flow shown is for the wastewater from the Triunfo County Sanitation District, which includes Oak Park, North Ranch, Westlake and Bell Canyon. Total treatment plant capacity is shown for the Tapia Wastewater Treatment Plant located at Calabasas in Los Angeles County. The Tapia Wastewater Treatment Plant also treats wastewater from the Las Virgenes Sanitation District located in Los Angeles County. Wastewater from Oak Park, North Ranch and Westlake is treated at the Tapia Wastewater Treatment Plant while the City of Los Angeles treats the wastewater from Bell Canyon. Capacity in 1980 was 4.0 mgd for treatment of solids and 8.0 mgd for wastewater treatment. In 1984 improvements were made to the plant to treat both water and solids at the 8.0 mgd capacity.

4.5 PUBLIC UTILITIES

Electrical power, natural gas, telephone, cable television service and communications equipment are included in the Public Utilities Section.

4.5.1 ELECTRICAL POWER

Ventura County is served by the Southern California Edison Company, which owns and operates generation plants, substations and transmission lines.

Figure 4.5.1 shows a map of the Public Utilities (Electrical Power and Natural Gas) in Ventura County. The major users of electrical energy based on each of the major sectors as noted in the 1991 Annual Report from Southern California Edison Company is as follows:

Residential	33%
Commercial	36%
Industrial	16%
Public Authority (Street Lighting)	9%
Resale	1%
Agriculture	2%
Other	3%
Total	100%

The Southern California Edison Company estimates monthly consumption of 520 kwh per dwelling unit.

According to Southern California Edison Company, no single geographic area is planned autonomously, but rather as part of the total system. This approach results in a more reliable, economical, and operationally flexible electrical system, which enables the customers to receive high quality service at a reasonable rate.

Electrical facilities include generation plants, transmission substations and transmission lines which are discussed below.

4.5.1.1 Generation Plants

Southern California Edison presently operates two major sources of generation in Ventura County (Mandalay and Ormond Beach), both of which are located along the Coastal Area of the City of Oxnard. The Mandalay facility is located in "west" Oxnard while the Ormond Beach facility is located in "south" Oxnard.

Both of these facilities are conventional oil-gas fuel types and are located within the coastal zone on the Oxnard Plain. The total generating capacity of these two power plants is 2,055 megawatts (MW) which is equivalent to approximately 10 percent of the total generating capacity of the SCE system serving 14 other Central and Southern California counties as of January, 1992. The amount of electricity produced by the two existing generating facilities in Ventura County is more than the total electrical requirements of the County.

The Mandalay Beach generating station consists of three units with a total generating capacity of 555 MW. The first two units are conventional oil-gas units, rated at 215 MW each, which began operation in 1959. The third unit is a 215 MW gas combustion turbine which began operation in 1970.

The Ormond Beach generating station consists of two conventional oil-gas units with a total generating capacity of 1,500 MW. The first unit began operation in December, 1971 and the second unit began operation in June, 1973. Both units are rated at 750 MW each.

4.5.1.2 Transmission Substations

There are two 220-66 kV source substations within Ventura County: Moorpark at 5027 Gabbert and the Santa Clara substation located in Ventura at 10351 E. Foothill Road. These stations provide 66 kV electric power to

the majority of the distribution substations in the County for serving the local loads of the area. Saugus 220-66 kV substation, which is located in Los Angeles County, also serves several 66 kV stations that are within Ventura County.

The name, location and general service area for the 66 kV distribution substations are listed in Figure 4.5.2.

Future improvement projects for the 1987-1991 period involve both the Santa Clara and Moorpark substations and their related line projects. Completion of these projects will be necessary to keep up with the electrical energy demand requirements for Ventura County. A new 66-16kV dual substation to be referred to as the Grimes Substation is expected to be on line in 1992 and will be located at Campus Drive in Moorpark and serve the East Moorpark Area. The electric load growth of the remaining areas in the County will be served from the existing substations by increasing their capacity as required.

The 66-16 kV substations provide a source for distribution lines and the smaller 16-4 kV substations. The name, location and general service area for these stations are listed below in Figure 4.5.3.

4.5.1.3 Transmission Lines

The electric power is distributed to individual customers from the substations through distribution lines operating at 16 kV or 4 kV.

These lines are normally extended underground from the substations and integrated with the existing distribution network of the area. During the coming years, it will be necessary to construct additional distribution lines from the different substations to meet the load requirements of the area. In addition, there will be a need to increase the length of many of the existing distribution lines to serve the remaining loads.

4.5.2 NATURAL GAS

Southern California Gas Company supplies natural gas to all of Ventura County through a fixed transmission and distribution system.

The Southern California Gas Company, North Coastal Division serves all the Cities within the County as well as unincorporated portions of the County. The headquarters of the North Coastal Division are located at 130 Patterson Avenue in Santa Barbara. The Ventura County company office is located at 324 South B Street in Oxnard.

There are approximately 1,125 miles of supply lines and distribution mains in the County. The number of connected meters in Ventura County is about 201,000.

The breakdown of gas usage by percentage for major sectors for Ventura County during 1991 is as follows:

Residential	20.40%
Commercial (including agriculture)	10.96%
Industrial	21.73%
Electric Generation	46.91%
Total	100%

For 1992, the Southern California Gas Company estimates the average consumption per household per month will be 53 therms. Southern California Gas Company officials from the North Coastal Division indicated they have adequate supplies and facilities to serve Ventura County to the year 2010.

4.5.3 TELEPHONE SERVICE

Telephone service is provided by Pacific Bell and GTE California, Inc. Communities served by Pacific Bell include Fillmore, Moorpark, Ojai, Simi

Valley, and Ventura; plus the unincorporated areas of Oak View, Piru and Saticoy.

GTE's Western Regional Headquarters is located in Thousand Oaks, serving a twenty county area with more than 330 communities. GTE provides phone service to the cities of Camarillo, Oxnard, Port Hueneme, Santa Paula and Thousand Oaks; plus the unincorporated areas of Newbury Park, Somis and Westlake.

4.5.4 CABLE TELEVISION SERVICE

Seven cable companies currently offer the residents of Ventura County a number of choices for their viewing pleasure. A description of each cable television company and the areas they serve follows:

- Avenue Cable serves west Ventura and a portion of the Central City area and a strip of hillside homes in the foothills.
- Comcast Cablevision of Simi Valley serves the entire City of Simi Valley.
- Falcon Cable serves a portion of Thousand Oaks and the South Coast Solromor area.
- Jones Intercable serves Oxnard, El Rio, Port Hueneme and surrounding beach areas.
- Mountain Meadows Cable Television serves the Mountain Meadows Planned Community portion of Moorpark.
- Ventura County Cablevision serves Fillmore, Ojai, the Ojai Valley, Somis, the Santa Rosa Valley, Oxnard, Piru, Camarillo, Moorpark, Newbury Park, Santa Paula, Thousand Oaks and Westlake Village.

4.5.5 COMMUNICATIONS EQUIPMENT

County communications equipment, operated by the Information Systems Department, includes radio, microwave, and telephone switching equipment, which is located at 17 separate sites, including each of the three community colleges. In addition, there are other governmental and privately operated communications equipment facilities (including radio and television transmitting and receiving antennas, radar stations and microwave towers) scattered throughout the County's hilltops. These facilities are located on the following peaks: Hall Mountain (north of Ventura), Rasnow Peak (south of Newbury Park), Red Mountain (south of Lake Casitas), South Mountain (southeast of Santa Paula), Sulphur Mountain (south of Ojai), Santa Susana Peak (Rocketdyne), and other peaks in the Santa Monica Mountains. The U.S. Navy maintains communications equipment on Mugu Peak.

4.5.6 CONCLUSIONS

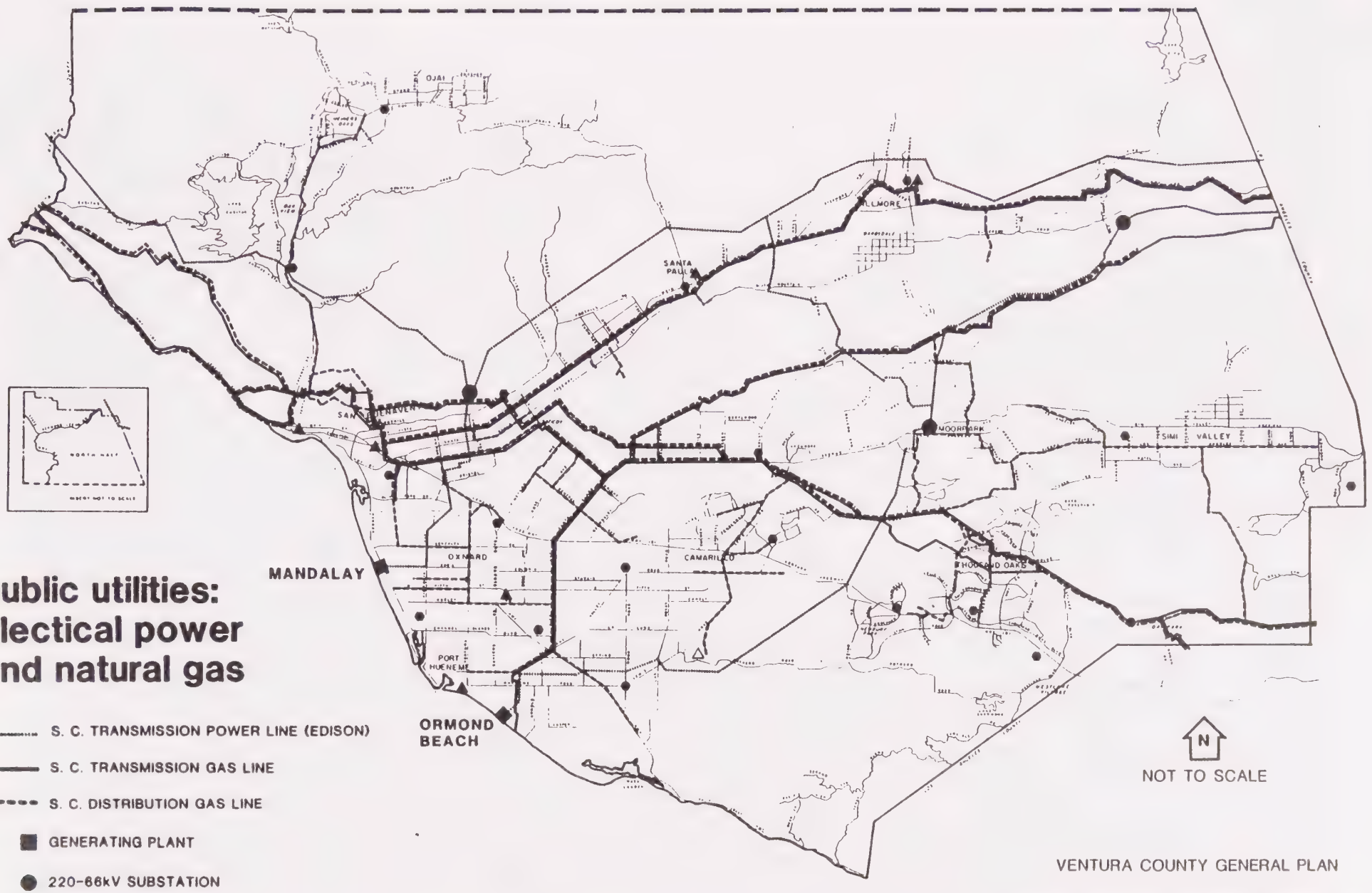
The public utilities discussed above represent a vital part of the urban infrastructure necessary for properly planned land use. Issues which warrant consideration in the Goals, Policies, and Program Chapter of the General Plan include guidance on the placement of utility facilities. The goals and policies will enable the County to have a stronger role in the location of future utility facilities and serve as notice and recommendation to the California Public Utilities Commission of the County's position.

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Pacific Bell, Forecast for Ventura County 1987-1991, April 1987.
Southern California Edison Company, Ventura County General Plan Powers System Development, Revised December 1974.
Southern California Edison Company, 1991 Annual Report.
Southern California Gas Company, 1991 Annual Report.
Ventura County Star Free Press Progress '87, Part II - Entertainment and Leisure, March 17, 1987, p. B-13.

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R. E. Hester, Southern California Gas Company, District Manager
Oras N. Racicot, Southern California Edison Company, Regional Affairs Manager
Herb Thordarson, Ventura County General Services Agency, Communications Department
Al Wong, Southern California Gas Co., Energy Systems Engineer
Gib Polry, GTE California Inc., Ventura County District Manager



public utilities: electical power and natural gas

- S. C. TRANSMISSION POWER LINE (EDISON)
- S. C. TRANSMISSION GAS LINE
- S. C. DISTRIBUTION GAS LINE
- GENERATING PLANT
- 220-66kV SUBSTATION
- 66kV DIST. SUBSTATION
- 16-4kV DIST. SUBSTATION

SOURCE: SOUTHERN CALIF. EDISON AND SOUTHERN CALIF. GAS COMPANY
DATE: SEPTEMBER 1987

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.5.1

FIGURE 4.5.2 66 kV DISTRIBUTION SUBSTATIONS

Name	Location	General Service Area
Camarillo	Adolfo Road, West of Santa Rosa Road	City of Camarillo
Casitas	Highway 33, South Edge Casitas Springs	Community of Casitas Springs
Channel Islands	Corner of Hemlock and Victoria Streets	Port Hueneme and southwest section of City of Oxnard
Chatsworth	Northrop Corporation Property, Santa Susana Hills	Northrop Corporation facilities and surrounding area
Colonia	Pleasant Valley and Wood Road, five miles east of Oxnard	City of Camarillo, northeast section of City of Oxnard
Estero	Southeast corner of Wood Road and Hueneme Road	Point Mugu U.S. Naval Air Station Test Grounds and adjacent area
Fillmore	Southwest corner of Fifth and "A" Streets (Dual facility - also a 16-4kV substation at same location)	City of Fillmore
Gonzales	Northeast of Oxnard Blvd. and Vineyard Avenue	North and northwest section of City of Oxnard
Levi	Highway 101 and Dempsey Road, Hueneme	Port of Hueneme and southern section of City of Oxnard
Moorpark	Los Angeles Avenue and Gabbert Road	City of Moorpark and adjacent area
Newbury	Lawrence Drive, north of Ventura Freeway	Community of Newbury Park
Oak Park	Lindero Canyon and Kanan Road	North Thousand Oaks
Ojai	403 Willow Street	City of Ojai
Potrero	East of Hampshire Road on Townsgate Road	City of Thousand Oaks/Westlake Village
Royal	First Avenue and Cochran Street	West section of Simi Valley
San Miguel	Transport Street, east of Callens Road, Ventura	Southwest section of City of Ventura
Santa Clara	10351 W. Foothill	Central/Eastern Section of Ventura
Santa Susana	Cochran Street and Tapo Road	East section of Simi Valley
Saticoy	10995 Foothill Road, Saticoy Avenue	Community of Saticoy and east section of community of Camarillo
Somis	Bradley Road and Los Angeles Avenue	Community of Somis, northeast section of community of Camarillo
Thousand Oaks	Wilbur Road east of Moorpark Road, Thousand Oaks	City of Thousand Oaks
Wakefield	East side of 12th Street, north of Main Street, Santa Paula	City of Santa Paula

FIGURE 4.5.3 16-4 kV SUBSTATIONS

Name	Location	General Service Area
Camarillo	Camarillo State Hospital grounds	Camarillo State Hospital
Fillmore	Southwest Corner of Fifth and "A" Street (Dual facility - also 66kV substation at same location)	City of Fillmore
Hueneme	Third and Main Street	Port Hueneme
Oxnard	Fifth Street east of Factory Lane	Portion of City of Oxnard
Pierpont	Northwest corner of Telegraph Road and Mills Road	North Central section of City of Ventura
Santa Paula	1343 East Main Street	Southeast section of the City of Santa Paula
Ventura	Intersection of Santa Clara Street and Ventura Avenue	Western section of City of Ventura

4.6 FLOOD CONTROL AND DRAINAGE FACILITIES

A description of the Ventura County Flood Control District and its flood control facilities are included in this section.

4.6.1 VENTURA COUNTY FLOOD CONTROL DISTRICT

The Ventura County Flood Control District is a special district that was created by Act 8955 (Ventura County Flood Control Act) of the State Legislature in 1944 for the purpose of providing for the control of floods and storm waters originating within the District (County) or originating outside the District and flowing into it, to conserve such waters for beneficial use, to prevent waste or exportation of waters and to reclaim drainage, storm, and flood waters. The District includes all of Ventura County except the offshore Channel Islands of Anacapa and San Nicolas. The County is divided into four numbered flood zones: Zones 1-4. Boundaries of the first three zones generally follow the limits of the three major drainage systems of Ventura County, and Zone 4 includes the Cuyama River Basin and the remainder of the County. These zones are further described below:

Zone 1 - Ventura River Watershed: Includes Ojai Valley, Matilija Area and West Ventura.

Zone 2 - Santa Clara River Watershed: Includes East Ventura, El Rio, Fillmore, Oxnard, Piru, Port Hueneme and Santa Paula.

Zone 3 - Calleguas Creek Watershed: Includes Camarillo, Newbury Park, Point Mugu, Santa Susana, Simi Valley, Somis and Thousand Oaks.

Zone 4 - Cuyama River Basin and Remainder of the County: This zone includes the part of Cuyama River Basin which lies within the northwestern part of the County, a small separated area in the northeast portion of the County plus the separated drainage area south of Simi Hills tributary to Malibu Creek in the southeastern part of the County, and the coastal drainage area on the south slope of the Santa Monica Mountains in the southern part of the County.

The County Flood Control District was created to conserve water resources as well as to control floods and storm waters, and to protect watercourses, watersheds, public highways, life and property from damage by these waters. Those facilities whose primary purposes are conservation of water, such as reservoirs and spreading grounds, are now largely carried on in various parts of the County by local public agencies among which are Casitas Municipal Water District, United Water Conservation District and Calleguas Municipal Water District.

The powers of the Ventura County Flood Control District are broad when they are related to the purposes of the Ventura County Flood Control Act. It has the power of perpetual succession; to sue and be sued; to acquire, hold and sell property both real and personal; the power of eminent domain and entry upon land; to employ civil engineers; to conduct technical and other investigations; to incur indebtedness; to issue bonds; to tax and assess; to make contracts; and to employ labor.

In addition to the Ventura County Flood Control District, several other agencies responsible for providing drainage of storm waters from, or conveyance of storm waters through the County include: (a) the various cities; (b) drainage and storm drain districts, and (c) Ventura County itself.

The policy adopted by the County Board of Supervisors and Flood Control Board of Supervisors, dated December 26, 1966, has established the criteria for determining the division of responsibility for flood control and storm drainage works among Ventura County Flood Control District and local agencies. These criteria state that projects for construction of such works as storm drainage catch basins, laterals and sub-laterals, designed to prevent inconvenience and minor damage and to control water

flowing overland in undefined channels, shall be accomplished by some form of local district; while such works as dams, debris basins, stream revetments, storm water collecting conduits, levees, channel improvements and watershed protection, which prevent major damage and loss of life, and which control water flowing in rivers or streams, are the responsibility of Ventura County Flood Control District.

Responsibilities of the Ventura County Public Works Agency through their policy, dated July 15, 1958, sets forth requirements concerning disposal of drainage and storm waters before approval of new subdivisions can be obtained. It requires subdividers to dispose of drainage water originating within and above their subdivisions that is concentrated by the construction of the subdivision by: (1) conducting the water to the natural water course draining the subdivision; or (2) discharging the water at the edge of their subdivisions and obtaining easements from downstream owners of the land over which the water will flow to the water course. Subdividers are required to construct the above works and such other works as will protect their subdivisions from damage by water and dedicate them to the County or Flood Control District for **red line channels.**

Factors considered in determining those channels for which maintenance, operations, acquisition of rights-of-way and construction of flood protection works are to be included under Flood Control District jurisdiction include: (a) magnitude of flood flows; (b) character of the watershed such as its slope and debris production; (c) character of the channel such as its slope, erodibility and stability; (d) effect of upstream works in modifying flood flows, erosion or deposition; and (e) probable ultimate land use; and (f) fiscal effects.

The Ventura County Flood Control District defines **red line channels** as channels over which the Flood Control District exercises regulatory jurisdiction. Regulatory jurisdiction does not imply ownership, as some of the red line channels are owned by the Flood Control District and some are owned by others. These red line channels can either be improved or unimproved.

4.6.2 FLOOD CONTROL DISTRICT FACILITIES

There are a total of 486.46 miles of channels under County Flood Control Regulatory Jurisdiction. Refer to Figure 4.6.1a and 4.6.1b for a map of both the North Half and South Half of Ventura County showing Ventura County Flood Control District red line channels. These totals are as follows:

Zone 1	72.12 miles
Zone 2	181.23 miles
Zones 2 & 3	57.23 miles
Zone 3	149.69 miles
Zone 4	26.19 miles
total	486.46 miles

The County Flood Control channels range from fully improved concrete channels to unimproved natural channels. Fully improved channels include: rectangular, trapezoidal, box and pipe. Other channels include natural, shaped (but maintained) and pipe and wire channels.

The staff for the County Flood Control District (VCFCD) is the Flood Control Department of the Public Works Agency. The Flood Control Department plans, designs, constructs and maintains flood control facilities (channels and debris basins) for the Flood Control District governed by the Board of Supervisors (Ex-Officio). Staff also works closely with Advisory Committees established for the three Flood Zones 1 through 3.

Ventura County Flood Control District (VCFCD) facilities include:

- Matilija Dam (Ojai)
- 682 El Rio Road, Oxnard - three Flood Control buildings
- Silver Strand - three pump stations
- Surfside Drive, Port Hueneme - drain pump station (flood control)
- Walnut Canyon Road Area (one mile north of High Street), Moorpark - PWA office, flood control, warehouse/office plus several waterworks buildings.
- In addition, there are many additional Flood Control District facilities and properties including debris dams, channels, basins, barrancas, washes and drop structures throughout the County.

Other Ventura County Flood Control District facilities are maintained for the following District programs:

- Precipitation measurement: VCFCD maintains 98 rainfall stations throughout and near Ventura County. A total of 65 stations are monitored by cooperative observers, while the remaining are operated by hydrographers of the District.

- Evaporation Stations: VCFCD maintains eight evaporation pans at selected rainfall stations.

- Stream gauging: VCFCD operates and maintains 31 streamflow recording stations within the County. In addition to these stations, records are available for the 13 stations owned and operated by the United States Geologic Survey.

- Flood Warning System: Since February 1979, VCFCD has been operating a flood warning system called "ALERT," an acronym for Automated Local Evaluation in Real Time, which was developed by the National Weather Service.

  Basically the flood warning system operation consists of four elements: Self-reporting rain gages at strategic points in the watershed, local flood warning center, the river forecast center and a weather consultant charged with forecasting the amount of rain that can be expected over the next 24 hours along with the maximum six hour amounts.

  There are also 15 self reporting stream gages incorporated into the extensive flood warning system. The primary function of these gages is to provide data during storms to help determine if a dangerous flooding situation is developing.

- Water resources facilities include: 368 key groundwater wells which were being monitored for water level change. Of these, 262 are presently monitored by the Department, 58 are monitored by United Water Conservation District (UWCD), 24 are monitored by Casitas Municipal Water District and 24 are monitored by other agencies and individuals. Principal groundwater monitoring and data collection programs performed by the District include water level, water quality, and seawater intrusion. In addition, all new water wells are accurately field located by District personnel, plotted on State well location base maps and assigned State well numbers. In 1985 the Groundwater Section of the Water Resources and Development Services Department started administering the Ventura County Water Well Ordinance which specifies sealing conditions for the construction and destruction of water wells, monitoring wells, engineering test holes and cathodic protection wells in all areas of the County except the City of Thousand Oaks. Permits must be obtained from the Department prior to any of the above work.

The Flood Control Department is also the responsible sponsoring local agency for Federal flood control projects throughout the County. It also provides coordination for the Federal Flood Insurance Program and is coordinating with the Federal Government in studying coastal erosion and control (see Hazards Appendix).

Other functions include coordination of the importation of water into the County, flood fighting and disaster operations, review of land developments for flood hazard, effects on water quality, issuance of Watercourse Permits, and operation of a Flood Warning System.

4.6.3 CONCLUSIONS

Providing necessary flood control and drainage facilities is an important aspect of the County's flood plain management program. The General Plan Goals, Policies and Programs should address issues relating to how the needed flood control facilities should be constructed and what the developers responsibilities should be.

REFERENCES

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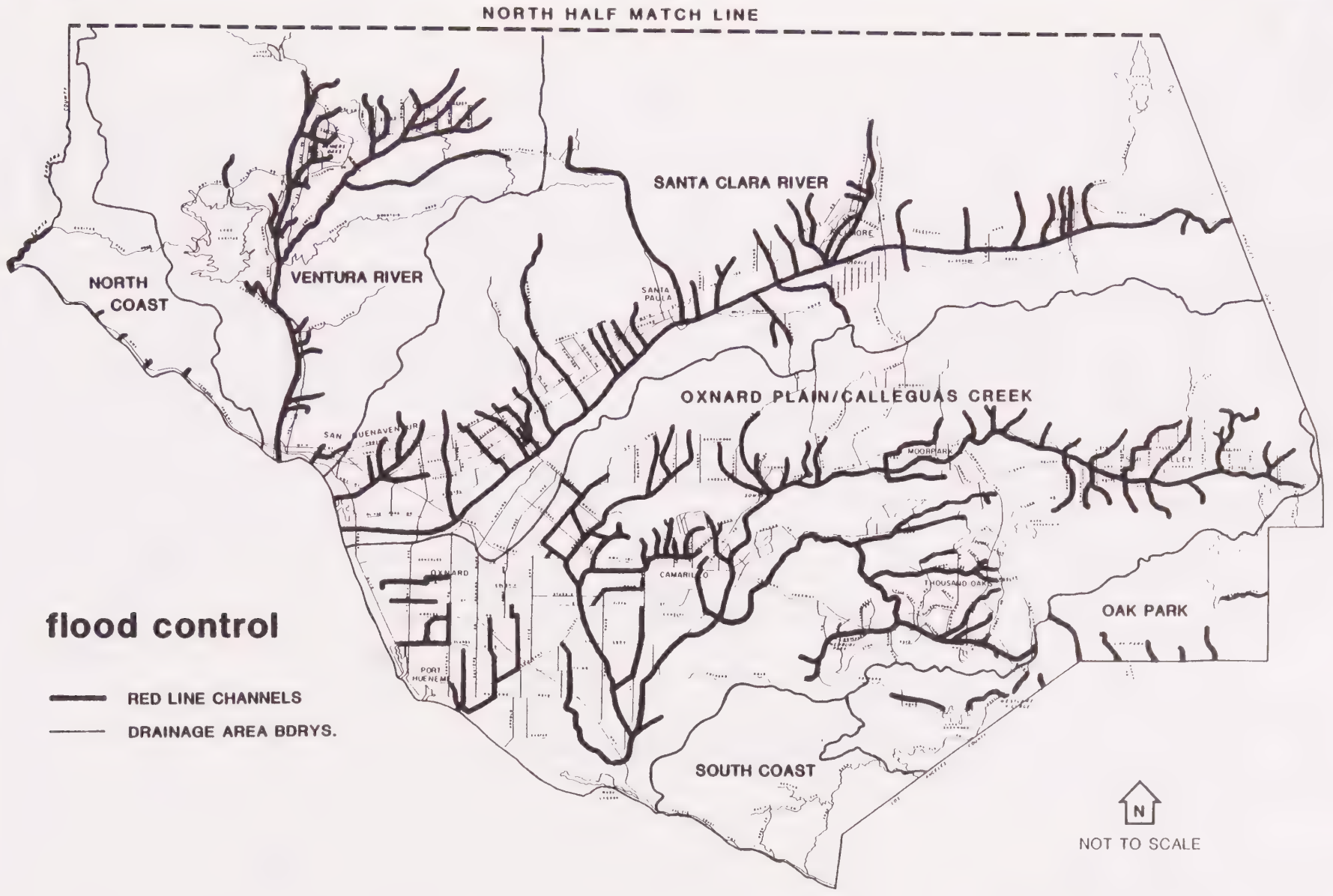
Ventura County Public Works Agency, Flood Control and Water Resources, Quadrennial Report of Hydrologic Data 1980-81, 1981-82, 1982-83, 1983-84, December 1984

Ventura County Board of Supervisors of Ventura County Flood Control District, Ordinance No. F.C. 18: Flood Protection and Regulation of Flood Control Facilities and Watercourse - Adopted November 28, 1972

West Annotated California Codes, Water Code Appendix, Volume 71, Chapter 46: Ventura County Flood Control Act, pp. 590-618, as amended, 1987 Cumulative Pocket, pp. 121-131.

INDIVIDUALS CONSULTED

Jeff Edgren, County of Ventura Public Works Agency, Real Property
Bill Haydon, County of Ventura Public Works Agency, Flood Control
John Turner, County of Ventura Public Works Agency, Water Resources



VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.6.1a

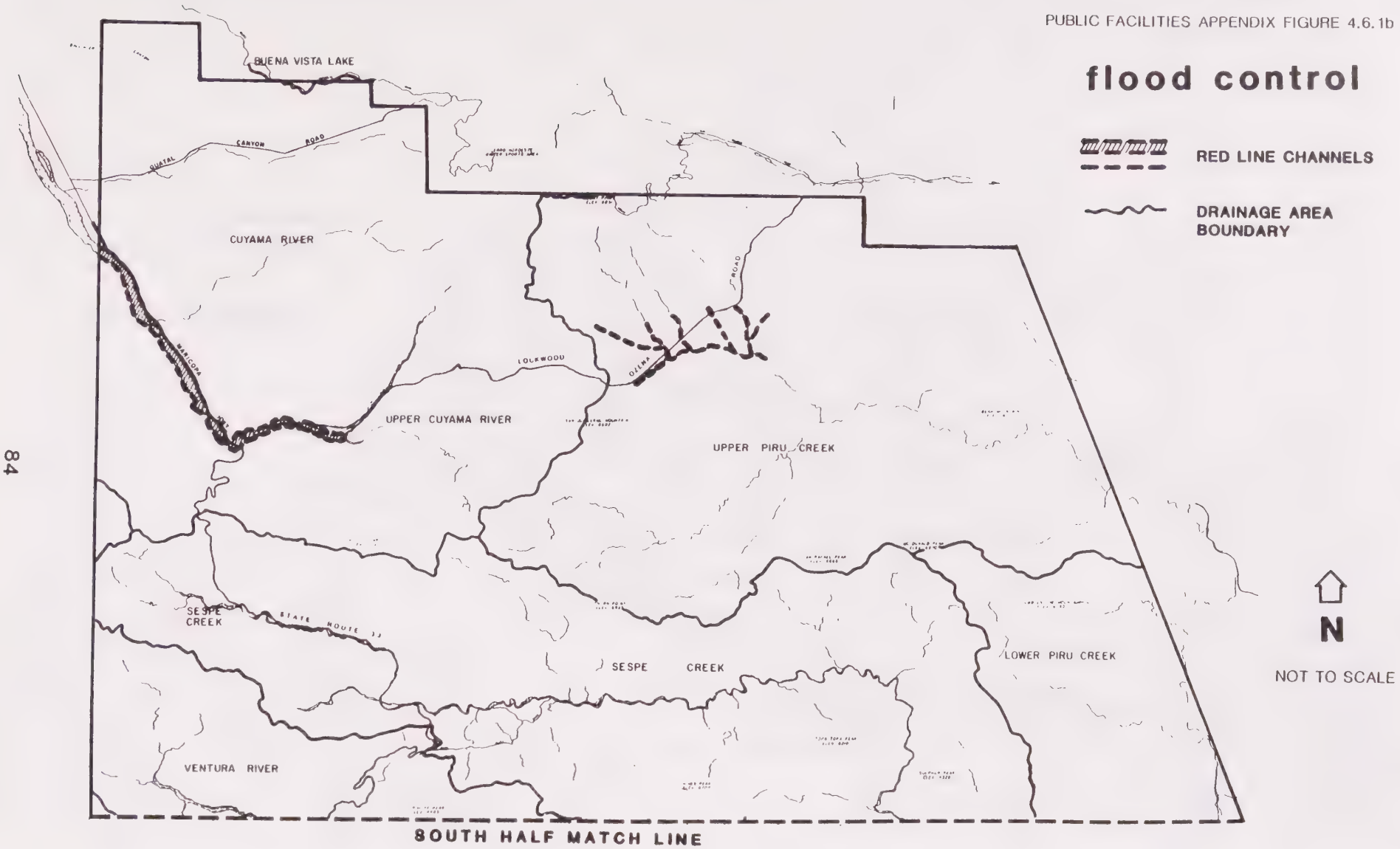
SOURCE: PUBLIC WORKS AGENCY FLOOD CONTROL

DATE: SEPTEMBER 1987

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.6.1b

flood control



RED LINE CHANNELS

DRAINAGE AREA BOUNDARY

N

NOT TO SCALE

SOURCE: USDA – FOREST SERVICE 1986

4.7 LAW ENFORCEMENT AND EMERGENCY SERVICES

The Sheriff's Department, jail and detention facilities, courts and emergency services are included in this Section.

4.7.1 SHERIFF'S DEPARTMENT

The Sheriff is the Chief Law Enforcement Officer for the County of Ventura and, as such, has jurisdiction over its unincorporated areas. In 1965, the Sheriff, through a contract, began to provide law enforcement services for the Cities of Thousand Oaks and Camarillo. In 1980, the City of Ojai also contracted for law enforcement services. The City of Moorpark became the fourth municipality to contract in July 1984. More recently, the City of Fillmore contracted for police services in June 1987.

The Sheriff is also the keeper of the County jails used for the detention of persons committed for contempt, or upon civil process, and for the detention of pre-sentenced and sentenced persons to imprisonment therein on conviction for a crime. The Sheriff must receive all persons committed to jail by a competent authority. The Sheriff is required to transport and deliver prisoners committed to state prisons to the place of their confinement. He is responsible for the maintenance of the well being of all prisoners within the county jail system.

The Sheriff is an officer of the Superior and Municipal Courts and as such, provides courtroom security with the placement of deputy sheriffs as bailiffs. In conjunction with his/her responsibilities as an officer of the court, the Sheriff provides for the service of both criminal and civil process throughout the county.

The Sheriff is the Director of Emergency Services and during incidents of natural disaster, becomes the coordinator of County and State requested resources. The Director is further responsible for reporting fiscal and management data to the State Office of Emergency Services and the Federal Emergency Management Agency.

To accommodate the responsibilities of the Office of the Sheriff, the department is comprised of eight major divisions: Support Services, West County Patrol, East Valley Patrol, Central County Patrol, Special Services, Custody, Project Development and Court Services.

The Sheriff's Department is headquartered at 800 South Victoria Avenue, Ventura and maintains stations in Camarillo, Fillmore, Lockwood Valley, Moorpark, Ojai, and Thousand Oaks. As of 1987, the Sheriff's Department was staffed by 872 personnel; 552 of whom were sworn officers. (Refer to Figure 4.7 for a map of Public Safety Facilities for the Sheriff's Department).

The remainder of this section on County Law Enforcement describes each of the seven divisions.

4.7.1.1 West County Division

This division is responsible for general law enforcement along the County's coastline to the mountains of Los Padres National Forest. This division works out of four substations that include the contract Cities of Fillmore and Ojai.

The Santa Clara Valley Station, located at 524 Sespe Avenue, Fillmore, serves the contract City of Fillmore and the unincorporated areas surrounding the City of Santa Paula, including the community of Piru, and the remainder of Santa Clara River Valley east to the Los Angeles County Line.

The Lockwood Valley Station, at 15021 Chico Larson Way, Frazier Park, covers a large unincorporated area in the northeast section of the County.

The Ventura Station is part of the Sheriff's Department Complex at the Ventura County Government Center, 800 South Victoria Avenue, Ventura. It

serves the unincorporated areas around the Cities of Ventura, Oxnard and Port Hueneme, as well as the communities of Montalvo, Saticoy, El Rio, and the Silver Strand and Hollywood Beach areas. The area extends west of Ventura to the Santa Barbara County Line.

The Ojai Station, located at 402 South Ventura Street in Ojai, is responsible for providing law enforcement services to over 196 square miles, including the contract city of Ojai. The City of Ojai is unique in the area for its Ojai Valley Volunteer Security Patrol, a group of senior citizens actively supporting the community's law enforcement programs.

West County is also the primary station for the Sheriff's Emergency Operations Center (EOC). This radio communications network that includes a computer aided dispatch system. In addition to its law enforcement functions, the dispatch system also handles emergency functions including ambulance dispatching for the entire County and fire dispatching for the City of Fillmore.

The EOC is also the primary reception point for the emergency "911" phone system. Emergency response time has been significantly reduced by simply dialing this three digit number for all emergency services. Finally, the EOC is the central location that connects the county with EOC's throughout the state and coordinates communications and resources in case of disaster or other emergency.

4.7.1.2 East Valley Station

This division serves the contract Cities of Thousand Oaks and Moorpark and surrounding unincorporated areas with complete law enforcement services. The service area extends from the top of the Conejo Grade south to the Los Angeles County Line and totals over 300 square miles. All deputies work out of the East Valley Station located at 2101 East Olsen Road in Thousand Oaks.

Besides housing patrol and investigative services, the East Valley Division also includes a booking and branch jail facility, plus a vehicle maintenance section. The East Valley Division has grown to keep pace with the dynamic area it serves.

The Sheriff's Department provides complete law enforcement services to the City of Thousand Oaks with its population of approximately 100,000 citizens and an area of approximately 50 square miles. The city's crime rate consistently remains in the lowest ten percent for cities in its size category.

In 1983 the City of Moorpark was incorporated, and began receiving contract law enforcement services from the Sheriff's Department in 1984. Its population of approximately 17,000 citizens is provided a progressive level of law enforcement. Utilization of crime prevention through environmental design plays a major role as Moorpark and the Sheriff's Department continue to grow.

4.7.1.3 Central County Division

The Central County Division provides law enforcement services to the City of Camarillo, the communities of Somis and Nyeland Acres and the remainder of the unincorporated area of the Oxnard Plain, south along the coast to the Los Angeles County line.

The Camarillo Station is located at 67 Palm Avenue in Camarillo and provides a full range of police services to the community. One of the special ways citizens of Camarillo support their Sheriff's personnel is by participating in the Camarillo Citizen's C. B. Patrol Program.

4.7.1.4 Custody Division

The Custody Division is the largest division within the Sheriff's Department both in terms of budget and personnel. It has the responsibility for providing a safe, as well as secure environment for an

average daily count of approximately 1,267 inmates. These inmates are housed at two major facilities. The largest inmate population is housed at the Main Jail/Pre-Trial Detention Facility located at the Ventura County Government Center, 800 South Victoria Avenue, Ventura. The remaining inmates are housed at the Ventura County Branch Jail-Honor Farm Facility at 370 West Baldwin Road, Ojai. (Refer to Figure 4.7 for location of these detention facilities).

The Main Jail/Pre-Trial Detention Facility was built in 1978 for a capacity of 438 inmates. In recent years, the capacity was doubled when single-person cells were remodeled to include a second bed. In 1987, the average daily population at this facility was approximately 884.

To meet the needs of an expanded female population, the Medium Security Facility at the Branch Jail-Honor Farm became the primary housing location for female inmates. All female inmates formerly were housed at the Main Jail/Pre-Trial Detention Facility.

The Main Jail/Pre-Trial Detention Facility has a total floor area of over 220,000 square feet and a rated bed space capacity of 884. This facility has the capability of providing a broad range of inmate programs and services and still maintain an acceptable level of security for both inmates and staff personnel. The two housing floors, third and fourth levels, are each divided into four quadrants. These quadrants are subdivided into four housing sections, each of which has the capacity to house 48 inmates. A medical housing section located on the second level has 18 cells. Medical, dental, and psychiatric services are provided by private medical contract personnel. Recreational facilities are located within the quadrants as well as on the roof and include weight machines, basketball, volleyball and handball.

The building is designed with the idea of bringing services to the inmates instead of moving inmates. As a result, a relatively small staff is able to provide all mandated services. The jail kitchen, located on the second level, prepares meals for all in-house inmates as well as sending out meals to the County's Work Furlough Program and Juvenile Facilities.

The Sheriff's Branch Jail Honor Farm is located on 135 acres in the Ojai Valley at 370 West Baldwin Road. It has a total capacity of 212 inmates. These inmates are housed in two separate areas within the facility. The wheel shaped building is occupied by minimum security inmates who, under the supervision of Sheriff's personnel, work in the kitchen, laundry, and farm areas. The other major building is occupied by female inmates in the custody of the Sheriff. The farm operation provides a considerable savings to the citizens of Ventura County by raising and processing all of the beef, pork and rabbit used in the jail system plus much of the vegetables. The Honor Farm laundry service provides laundry services for the entire Custody Division as well as the Work Furlough Program. Other buildings include: a deputy residence, administrative office, mobile office, agriculture-related buildings, carpentry shop, welding shop, storage, garages, machine shop, and a boiler building.

Plans are proceeding for the construction of a new jail facility to relieve the overcrowding in the existing facilities. The new jail facility will be located in the west Santa Clara River Valley, south of Highway 126 at the terminus of Todd Road. The facility will have the capacity to house 2,307 inmates. The jail will consist of modular buildings and accessory structures. Plans for the jail also involve an onsite sewage treatment plant and water storage system. Facilities include an inmate laundry facility, kitchen, inmate vocational/educational facility, administrative offices and inmate vocational/training programs. Work began in 1988 to refurbish a U.S. Forest Service Camp in Rose Valley that will house approximately 160 inmates.

4.7.1.5 Project and Development Division:

The division is responsible for overseeing the construction of a new jail facility that is being built to relieve the overcrowding in the existing facilities. The new jail facility will be located in the west Santa Clara

River Valley, south of Highway 126 at the terminus of Todd Road. The facility will have the capacity to house 2,307 inmates. The jail will consist of modular buildings and accessory structures. The jail will also involve an onsite sewage treatment plant and water storage system. Facilities include an inmate laundry facility, kitchen, inmate vocational/educational facility, administrative offices and inmate vocational/training programs. The division is also responsible for developing interim solutions to the jail overcrowding problems.

4.7.1.6 Special Services

The Special Services Division has a variety of functions that are performed by the following bureaus: Major Crimes, Special Investigations, Technical Services, Crime Laboratory, and the Air Unit. The Sheriff's hangar facility is located at Camarillo Airport at 275 E. Pleasant Valley Road, Camarillo. Other areas of responsibility and special details include the Bomb Disposal Unit, Search and Rescue, Executive Protection, Mounted Patrol Detail and the Hostage Negotiation Team.

4.7.1.7 Support Services Division

This is the support element for the Sheriff's Department. It includes the Record Bureau, Research and Planning Bureau, Office of Emergency Services, Personnel Bureau and Psychological Services.

The Training Bureau is responsible for the training of police recruits at the Ventura County Police and Sheriff's Training Academy and is located at 425 Durley Avenue, Camarillo Airport. This regional academy is accredited by California's Commission on Peace Officers Standards and Training. This bureau also handles a multitude of in-service training programs for all Sheriff's personnel. In addition, an extensive video tape and closed circuit television system are part of these efforts.

4.7.1.8 Court Services Division

This division was formed in 1980 when the County Marshal's Office merged with the Sheriff's Department. It handles all of the law enforcement assignments that center around Ventura County Court System, including both Superior and Municipal Courts.

The primary responsibility of Deputies assigned to the Court Security Bureau is to act as bailiffs and provide court security. The Field Service Bureau is the second major component of the Court Services Division, which processes subpoenas, levys, writs, attachments, garnishments, and civil warrants. The bureau also assists the courts with bail settings and own recognizance release investigations.

4.7.2 JAIL AND DETENTION FACILITIES

Inmates in Ventura County are housed at two major facilities: the Main Jail/Pre-Trial Detention Facility located at the Ventura County Government Center in Ventura, and the remaining inmates are housed at the Ventura County Branch Jail-Honor Farm at 370 West Baldwin Road in Ojai Valley. The East Valley Station at 2201 E. Olsen Road in Simi Valley has a temporary jail holding facility. Plans are proceeding for the construction of a new jail facility to be located in the west Santa Clara River Valley, south of Highway 126 at the terminus of Todd Road.

The jail and detention facilities are described in greater detail within the Custody Division of the Sheriff's Department (Section 4.7.1.4). Other facilities and services related to jail and detention facilities are provided by the Corrections Services Agency.

4.7.2.1 Corrections Services Agency

The purpose of the Corrections Services Agency is to unify and coordinate many of the correctional services supported by the County of Ventura. Achievement of this purpose requires the agency to deliver a magnitude of

services to a wide variety of cases referred to it by citizens, schools, law enforcement, and the courts.

Briefly, these services are provided by the agency through four divisions: Court, Field, Institutional, and Support Services. Basically, Court Services is responsible for juvenile and adult intake screening, prepares pre-sentencing reports for both the Criminal and Juvenile Courts, and administers a Youth Services Program, designed to preempt delinquent behavior. Field Services provides the supervision for adult and juvenile probationers. Institutional Services supports three juvenile (Tatum, Colston, and Juvenile Restitution) and one adult (Work Furlough) facilities to house sentenced minors and adults. Work furlough also administers the Work Release and Direct Work Programs that are designed to cultivate community service work projects for adults in lieu of incarceration. Support Services centralizes resources in operations designed to more efficiently benefit those programs previously discussed.

The main Corrections Services Agency Office is located at the Criminal Justice Complex, County Government Center, 800 South Victoria Avenue, Ventura. Facilities include:

- Clifton Tatum Center (Ventura County Juvenile Hall) is located at 380 Hillmont, Ventura (owned).
- Frank A. Colston Youth Center (local placement for juvenile offenders) is located at 375 Hillmont, Ventura (owned).
- Juvenile Restitution Project/Work Release Center is located at 381 Hospital Road, Ventura (owned).
- Work Furlough is located at 410 Willis Avenue, Camarillo, on the Camarillo Airport Property. Currently, there are two buildings: Work Furlough Facility Bldg. 276 and Work Furlough Bldg. 252 (including dining hall and offices) (owned).

Court Services are located at the following locations:

- 384 Hillmont Street, Ventura (owned)
- 3475 Old Conejo Road, Newbury Park (leased)

Field Services have offices at:

- 1400 Vangard Drive, Oxnard (owned)
- 3855 Alamo St., Simi Valley (owned)
- 1065 E. Main Street, Ventura (leased)

4.7.3 COURTS

The Municipal Court has original jurisdiction in felony preliminary hearings, civil matters of $15,000 or less, misdemeanors, infractions, and small claims matters of $1,500 or less.

The Superior Court is a court of original jurisdiction, and is the highest level of trial court in the County and State. It has jurisdiction in all cases in equity, cases involving title to and possession of real property, civil cases where the demand exceeds $15,000, criminal cases classified as felonies, probate and family law matters, adoptions, mental health and juvenile cases, as well as matters appealed from the lower trial court (Municipal Court).

Both the Municipal Court and Superior Court are located in the Hall of Justice, located at the Ventura County Government Center complex at 800 South Victoria Avenue, Ventura. Simi Valley also has a Municipal Court Branch located at 3855-F Alamo Street, Simi Valley (owned).

4.7.4 EMERGENCY SERVICES

There will always be emergencies and disasters. Mitigating them, preparing for them, responding to them, and recovering from them are primarily the responsibilities of the State and local governments. Because every emergency occurs at the local level, local officials must be prepared to respond quickly and effectively, especially in the initial

phase of a disaster before the State or Federal governments provide supplemental assistance. It is, therefore, necessary that local government be able to execute operational plans effectively, mobilize available resources, and call upon response personnel trained to carry out assigned emergency responsibilities.

The overall goal of the Ventura County Office of Emergency Services, as the leader of the local effort, is: "to save lives and protect property by developing programs and emergency operational capabilities that mitigate, prepare for, respond to, and recover from any emergency or disaster - whether peacetime or war-related."

According to County Ordinance 2538, the Sheriff is the Director of Disaster (Emergency) Services. Emergency Services planning in Ventura County is conducted in the Sheriff's Department, Support Services Division, Office of Emergency Services. The staff coordinates planning at each government level.

Local government is recognized as the first line of official public responsibility for emergency management activity. In a disaster, State and Federal Governments can be counted on for major support only when damage has been usually widespread and severe. The role of local emergency management agency, as the focus of the planning effort, is to develop and maintain an ongoing program of mitigation, preparedness, response, and recovery. It is not a separate unit or action group set apart from the normal functions of government, standing by to "save the day," in the event of an emergency. The Emergency Management Agency serves the Board of Supervisors and Chief Administrative Office by working with the departments of local government and private sector organizations in the development of plans and capabilities responsive to those hazards which seriously threaten the jurisdiction. Prior to a crisis, hazard mitigation programs can reduce the vulnerability of people and property. In a crisis, effective response is often a result of what has been accomplished prior to the emergency.

The eight major elements of the Office of Emergency Services work program includes:

1. Emergency Organization Planning and Management.
2. Direction, Control and Warning.
3. Population Protection.
4. Radioactive Contamination, Monitoring and Control.
5. Disaster Related Public Education and Emergency Public Information.
6. Emergency Support Services.
7. Hazard Analysis and Mitigation.
8. Multi-Hazards Functional Planning Guidance.

Programs in the department include Public Education presentations on the following hazards:

1. Earthquakes
2. Floods
3. Tsunami/Seiche
4. Wildland Fire
5. Hazardous Materials
6. Landslides
7. Dam Failure Emergency
8. Nuclear Defense/Radiological
9. Transportation Accidents (involving airplanes, boats, major highway accidents, and railroads)

Emergency Response Plans are kept on all of the above natural and man-made disasters. Staff of the department participate in Local, Regional, State, and Federal committees for California and Southern California Emergency Services.

As part of this planning, the Office of Emergency Services has developed and maintains an inventory of facilities for shelter, has established a

capability to supply shelters with necessary materials to function, and has provided pre-designated evacuation routes for disaster events including dam failures, hazardous materials spills, earthquakes, tsunamis, and wildfires.

4.7.5 CONCLUSIONS

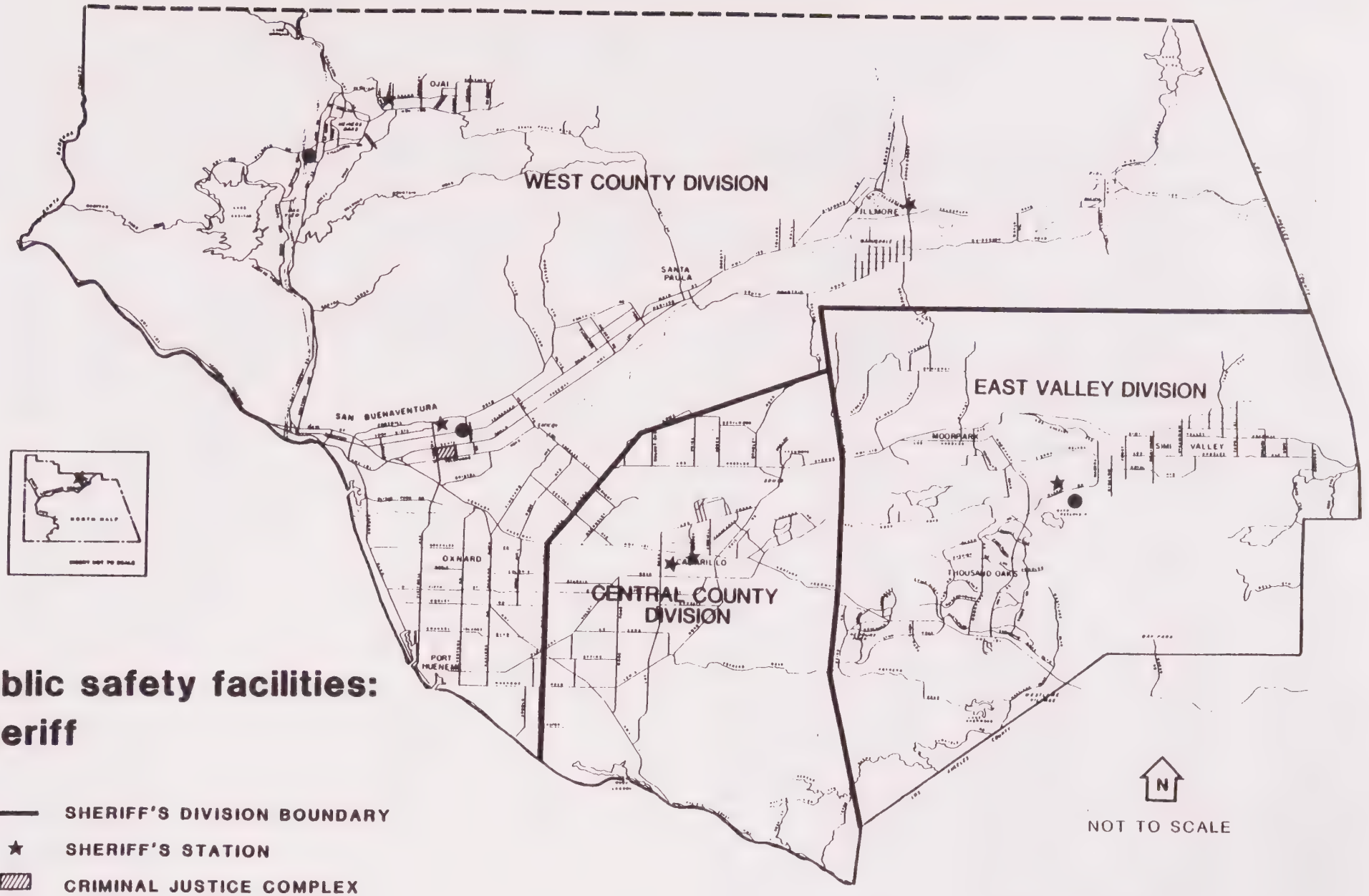
Crime has a direct effect on the quality of life in Ventura County. As County population increases, the demand on law enforcement and criminal justice services will be similarly impacted. To meet this challenge, the Goals, Policies, and Programs Chapter of the General Plan should address issues related for the provision of adequate security for new development.

REFERENCES

Ventura County Sheriff's Department, 1984 Annual Report
Corrections Services Agency Goals and Objectives 1986-87
Municipal Court Goals and Objectives 1986-87
Superior Court Goals and Objectives 1986-87
Sheriff's Department Goals and Objectives 1986-87

INDIVIDUALS CONSULTED

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Karen Guidi, Office of Emergency Services, Ventura County Sheriff's Department
Lt. Richard Rodriguez, Planning and Research, Ventura County Sheriff's Department
Commander William Wade, Custody Division, Ventura County Sheriff's Department



public safety facilities: sheriff

- SHERIFF'S DIVISION BOUNDARY
- ★ SHERIFF'S STATION
- CRIMINAL JUSTICE COMPLEX
- ● JAIL LOCK-UP FACILITIES

N

NOT TO SCALE

SOURCE: VENTURA COUNTY PLANNING DIVISION 1990

VENTURA COUNTY GENERAL PLAN

PUBLIC SAFETY FACILITIES APPENDIX Fig. 4.7

Revised Dec. 1990

4.8 FIRE PROTECTION

The Fire Protection Section includes a discussion of the Ventura County Fire Protection District and other fire protection agencies which serve Ventura County.

4.8.1 VENTURA COUNTY FIRE PROTECTION DISTRICT

The Ventura County Fire Protection District is a special district formed on May 16, 1928, and governed by the Board of Supervisors. The Ventura County Fire Protection District protects life and property by providing fire prevention, fire suppression, fire investigation, hazardous materials response team, rescue and related emergency services.

The County Fire Protection District operates 32 fire stations that serve the municipalities of Camarillo, Moorpark, Ojai, Port Hueneme, Simi Valley, and Thousand Oaks, and the unincorporated regions of Ventura County.

The Fire Protection District is divided into four battalion areas with a total of 32 fire stations strategically located to provide fire protection for urban areas, as well as the extremely important watershed areas, for the benefit of the entire County (refer to Figure 4.8.2 for the Station Directory list for the County Fire Protection District). Figure 4.8.1 shows a map of the fire stations.

Each existing station is equipped with one first run engine. Various stations have reserve engines and patrol units with three rescue squads, two light air units and three ladder trucks geographically distributed. Response times vary considerably throughout the service area depending on the area's distance to the nearest station.

In 1990, the Fire Protection District had a staff of 390 fire suppression personnel plus an additional 40 reserve firefighters and 70 support personnel. The County has mutual aid agreements with all adjacent counties, incorporated cities within the County plus Carpinteria, military installations and the U.S. Forest Service. Ventura County Fire Protection District has also signed a Memorandum of Agreement to establish a coordinated effort with ten other Federal, State and local agencies to accomplish joint arson investigation and resource sharing.

In 1990, major fire equipment for the Fire Protection District included:

32 First Run Engines
16 Reserve Engines
10 Wildland Brush Trucks
10 Patrol Units
3 Rescue Units
3 Aerial Ladder Trucks
1 Reserve Ladder Truck
3 Bulldozers
2 Hazardous Materials (HazMat) Response Vehicles
2 Light Air Units
2 Foam Tenders
2 Water Tenders
4 Helicopters available through Sheriff's Department

4.8.1.1 Fire Prevention

Besides the actual fighting of fires, a great deal of time is spent on preventive measures and preparation for combating fires. Fire prevention consists of making inspections of buildings, schools, and homes, and making recommendations for fire safety. Other Fire Prevention Programs include:

- New Construction Plan Check (Fire Safety)
- Occupancy Permit Inspections (Fire Safety)
- Fire Safety Inspections (Commercial, Industrial & Residential)
- Hazardous Material Inspections

- Fire Investigations
- Juvenile Fire Setter Counseling
- Construct Firebreaks and Fire Roads
- Conduct Prescribed Burns
- Issue Burning Permits
- Inspection of Fire Hydrants
- Fire Systems Plan Check and Inspections
- Weed Abatement
- Issue Explosive Permits

Fire prevention programs are also sponsored through the schools, service clubs, and other organizations with the following public education programs available:

- Baby Sitter Fire Safety
- Brush Fire Safety
- Business Fire Safety
- Career Guidance
- Earthquake Safety
- Fire Apparatus Demonstrations
- Exiting
- Junior Fire Marshal
- Fire Extinguishers
- Home Fire Safety
- Mobile Home Fire Safety
- Motel and Hotel Fire Safety
- Smoke Detectors
- Station Tours
- Stop-Drop and Roll

4.8.1.2 Emergency Services

The following represents a comprehensive list of emergency services provided:

- Firefighting:
  - Building
  - Vegetation
  - Vehicle
  - Refuse
  - Out Structures (Storage Sheds, Barns, etc.)
  - Mobile Homes
  - Explosions
  - Oil Field Facilities
- Pressure Explosions
- Emergency Medical Services:
  - First Aid
  - CPR
- Rescues:
  - Extraction
  - Vehicle Accidents
  - Cave-ins (Person Stuck)
- Hazardous Conditions (Fuel Spill, Electrical, etc.):
  - Hazardous Material Release
  - Potential Hazardous Material Release
- Public Service:
  - Water Vac
  - Locked Out (Car/Home)
  - Smell of Gas/Smoke, etc.
  - Snake Calls
- Mutual Aid to Other Agencies

4.8.1.3 Peak Load Water Supply Requirements

Minimum required fire flows are identified in the Ventura County Water Works Manual, Section 2.33, however, commercial and industrial building fire flow requirements are determined by using the Insurance Services Organization (I.S.O.) formula as identified in the Uniform Fire Code, Section 10.301.

Minimum fire flow standards for Ventura County are 1,000 gallons per minute (GPM) in residential areas, 1,250 GPM minimum in commercial areas, and 1,500 GPM minimum in industrial areas.

4.8.1.4 Future Fire Protection Facilities for the Next Five Years

In 1990, the Ventura County Fire Protection District identified the following new facilities needed in the next five years.

- Replace or remodel the Lake Sherwood Fire Station (Station 33).
- Replace or remodel Oak View Fire Station (Station 23).
- Replace or remodel Camarillo Fire Station (Station 54).
- Build and operate a new station in North Ranch area near Kanan Road and Westlake Blvd.
- Build and operate a new fire station in the West Simi Industrial area (Alamos Canyon).
- Build and operate a new fire station in the East Santa Rosa Valley.

In addition, a new computer aided dispatch is in the process of being implemented and is scheduled to be operational by the end of 1991.

4.8.1.5 Fire Protection District Board of Appeals

On November 22, 1983, the Board of Supervisors adopted an ordinance establishing a five-member Board of Appeals for the Fire Protection District. Appointments will be on a two-year basis. Members receive no remuneration.

The function of this Board is to consider the suitability of proposed alternative materials or methods of construction when these cannot be approved by the Fire Chief. The Board also provides a means for establishing reasonable interpretations of the Fire Protection District Ordinances. This process may be initiated when ambiguities appear or when important differences occur between a person and the Fire District.

4.8.2 OTHER FIRE PROTECTION AGENCIES

The cities of Oxnard and Ventura have their own separate fire departments staffed with paid firefighters at stations located throughout each city. The cities of Fillmore and Santa Paula each have their own volunteer fire departments. The Los Padres National Forest area of the County is served by the U.S. Forest Service.

U.S. Forest Service Fire Stations are located at:

- Chuchupate (west of Frazier Park in the Cuddy Valley area)
- Wheeler Gorge (on Highway 33 north of Ojai near Wheeler Springs)
- Oat Flat (north of Fillmore near the Sespe Oilfields)
- Ozena (on Highway 33 near junction of Lockwood Valley Road)
- Apache Saddle (3 miles west of Pine Mountain Club)
- Temscal (northeast of Piru adjacent to Lake Piru); and
- A helicopter pad on the west side of Lake Casitas.

4.8.3 CONCLUSIONS

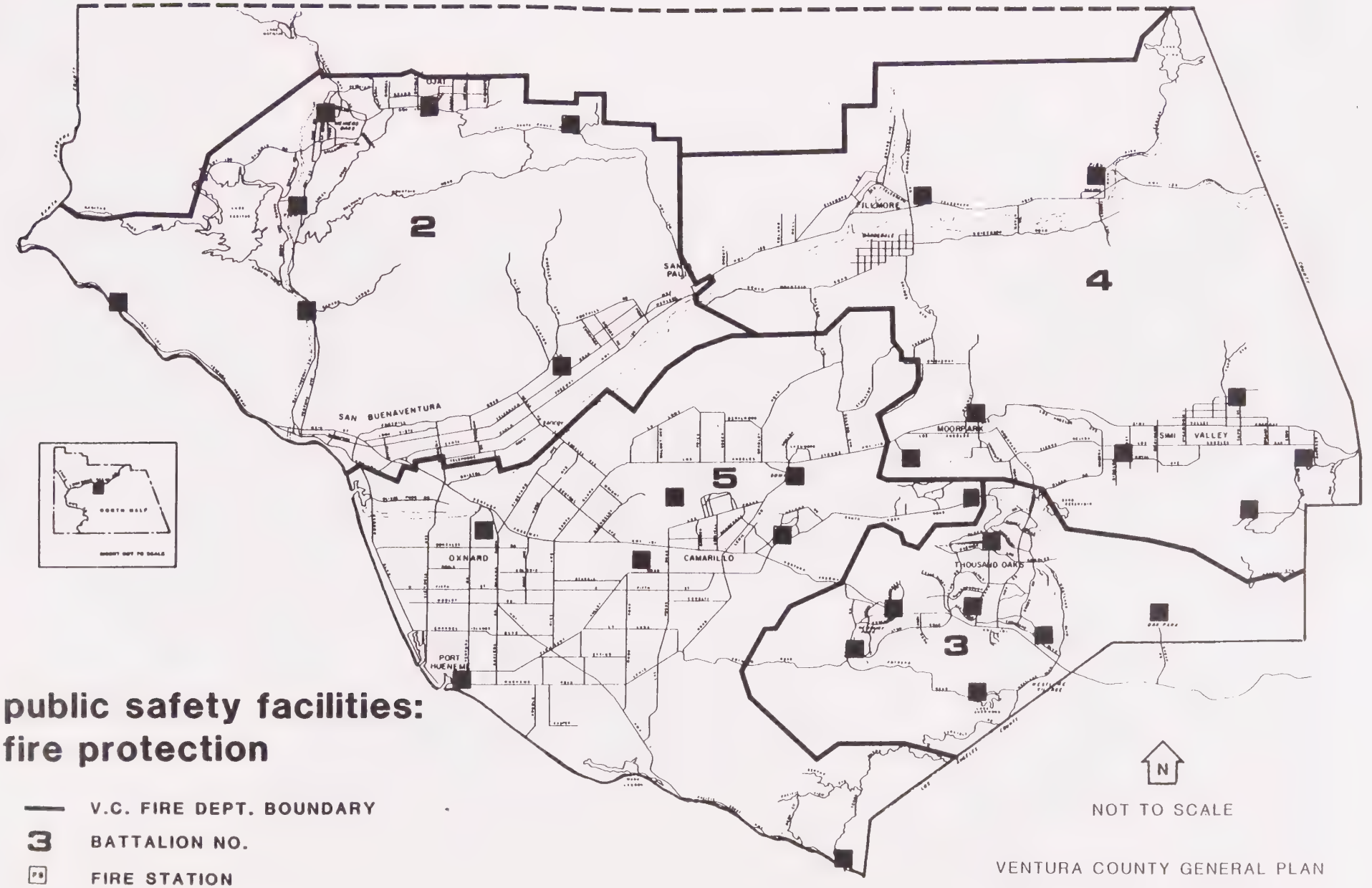
The provision of adequate fire protection services is an essential adjunct to development in Ventura County. Issues which should be addressed in the General Plans, Goals, Policies, and Programs include means to ensure that an adequate level of fire protection can be provided for all new development and give guidance in the selection of future fire stations to minimize response time.

REFERENCES

Ventura County Fire Protection District, Developer's Guide, December 1984.
Ventura County Fire Protection District, Goals and Objectives 1989-90.
Ventura County Fire Protection District, Private Road Guidelines, November 13, 1990.

INDIVIDUALS CONSULTED

Don Ellis, Deputy Fire Chief, Ventura County Fire Protection District
Gary Girod, Battalion Chief, Ventura County Fire Protection District
Dave Harvey, U.S. Forest Service, Ojai Ranger Station
Stan Rapp, Deputy Chief, Ventura County Fire Protection District
Captain Dan Spykerman, Ventura County Fire Protection District
George Lund, Deputy Fire Chief, Ventura County Fire Protection District
Robert Holaway, Deputy Fire Chief, Ventura County Fire Protection District
Richard L. Wilson, Fire Marshal, Ventura County Fire Protection District



public safety facilities: fire protection

— V.C. FIRE DEPT. BOUNDARY

3 BATTALION NO.

FIRE STATION

NOT TO SCALE

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX Fig.4.8.1

SOURCE: VENTURA COUNTY PLANNING DIVISION 1990

Revised Dec. 1990

FIGURE 4.8.2

VENTURA COUNTY FIRE PROTECTION DISTRICT
FACILITIES AND STATION DIRECTORY

Headquarters: Camarillo Airport, 165 Durley Avenue, Camarillo, CA 93010

Other Fire Facilities at Ventura County Fire Protection District Headquarters include:

- District Headquarters, 165 Durley Avenue, Camarillo
- Fire Prevention Annex, 165 Durley Avenue, Camarillo
- Fire Station #50, 615 Aviation Drive, Camarillo
- Training Smoke Room, 555 Aviation Drive, Camarillo
- Fire Communications Center, 355 Post Street, Camarillo
- Repair Shop for Fire Engines, 575 Aviation Drive, Camarillo

Radio Communication Facilities are located at Anacapa Island, Red Mountain, Rocketdyne and South Mountain.

STATION DIRECTORY		
NUMBER	LOCATION	ADDRESS
16	Lockwood Valley	Star Route Box 475, Frazier Park 93225
20	Summit	12727 Santa Paula-Ojai Rd., Santa Paula 93060
21	Ojai	1201 Ojai Ave., Ojai 93023
22	Meiners Oaks	460 South LaLuna Ave., Ojai 93023
23	Oak View	15 Kunkle St., Oak View 93022
25	Rincon	5674 W. Pacific Coast Highway, Ventura 93001
26	Saticoy	12391 W. Telegraph Rd., Santa Paula 93060
27	Fillmore	613 W. Telegraph Rd., Fillmore 93015
28	Piru	513 W. Church St., Piru 93040
30	Civic Center	325 W. Hillcrest Dr., Thousand Oaks 91360
31	Westlake	151 Duesenberg Dr., Thousand Oaks 91360
32	Potrero	830 S. Reino Rd., Newbury Park 91320
33	Lake Sherwood	25 E. Potrero Rd., Thousand Oaks 91360
34	Arboles	555 Avenue de los Arboles, Thousand Oaks 91360
35	Newbury Park	2500 W. Hillcrest Dr., Newbury Park 91320
36	Oak Park	855 N. Deerhill Rd., Agoura 91301
40	Mountain Meadows	4185 Cedar Springs St., Moorpark 93021
41	Blackstock Church St.	1920 Church St., Simi Valley 93065
42	Moorpark	782 Moorpark Ave., Moorpark 93021
43	Susana Knolls	1262 Cypress St., Santa Susana 93063
44	Wood Ranch	1050 Country Club Dr., Simi Valley 93063
45	Pacific	790 Pacific Ave., Simi Valley 93065
46	Tapo	3265 N. Tapo St., Santa Susana 93063
50	Camarillo Airport	615 Aviation Drive, Camarillo 93010
51	El Rio	660 El Rio Drive, Oxnard 93030
52	Mission Oaks	5353 Santa Rosa Rd., Camarillo 93010
53	Port Hueneme	304 Second Street, Port Hueneme 93041
54	Camarillo	2474 Ventura Blvd., Camarillo 93010
55	Las Posas	403 Valley Vista Dr., Camarillo 93010
56	Malibu	11677 E. Pacific Coast Highway, Malibu 90265
57	Somis	3356 Somis Road, Somis 93066

Source: Ventura County Fire Protection District, 1992

4.9 EDUCATIONAL FACILITIES AND SERVICES

The Educational Facilities and Services Section includes a discussion of the public elementary and secondary schools, Ventura County Superintendent of Schools Office Services, Public Community Colleges, Private Schools and Library Services.

4.9.1 PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

There are 20 public school districts in Ventura County which include seven Unified School Districts, 11 Elementary School Districts and two High School Districts. School district boundaries are generally not coterminous with city boundaries as portions of the unincorporated County areas are found in each school district. (Refer to Figure 4.9.1)

4.9.1.1 Unified School Districts in Ventura County (K-12) include:

- Conejo Valley Unified School District (Thousand Oaks, Newbury Park and Westlake, approx. 17,100 students)
- Fillmore Unified School District (Fillmore, Bardsdale, Piru and Northeast portion of the County, approx. 3,000 students)
- Moorpark Unified School District (Moorpark, approx. 4,900 students)
- Oak Park Unified School District (Oak Park and Agoura, approx. 1,100 students)
- Ojai Unified School District (Ojai Valley, approx. 3,300)
- Simi Valley Unified School District (Simi Valley, approx. 2,100 students)
- Ventura Unified School District (Ventura, Montalvo, Oak View and Saticoy, approx. 14,900 students)

Each of these districts and their school facilities are described below:

(1) Conejo Valley Unified School District, 1400 East Janss Road, Thousand Oaks.

Elementary Schools include:

- Acacia School (K-6) - 55 Norman Avenue, Thousand Oaks
- Aspen School (K-6) - 1870 Oberlin Avenue, Thousand Oaks
- Banyan School (K-6) - 1120 Knollwood, Newbury Park
- Conejo School (K-6) - 280 Conejo School Road, Thousand Oaks
- Cypress School (K-6) - 4200 Kimber Drive, Newbury Park
- Glenwood School (K-6) - 1135 Windsor Drive, Thousand Oaks
- Ladera School (K-6) - 1211 Calle Almendro, Thousand Oaks
- Madrona School (K-6) - 612 Camino Manzanas, Thousand Oaks
- Manzanita School (K-6) - 2626 Michael Drive, Newbury Park
- Maple School (K-6) - 3501 Kimber Drive, Newbury Park
- Meadows School (K-6) - 2000 La Granada Drive, Thousand Oaks
- Park Oaks School (K-6) - 1335 Calle Bouganvilla, Thousand Oaks
- University School (K-6) - 2801 Altas Avenue, Thousand Oaks
- Walnut School (K-6) - 581 Dena Drive, Newbury Park
- Weathersfield School (K-6) - 3151 Darlington Drive, Thousand Oaks
- Westlake School (K-6) - 1571 East Potrero Road, Westlake Village
- Westlake Hills School (K-6) - 3333 South Medicine Bow Court, Westlake Village
- Wildwood School (K-6) - 620 West Velarde, Thousand Oaks

Intermediate Schools include:

- Colina Intermediate School (7-8) - 1500 Hillcrest, Thousand Oaks
- Los Cerritos Intermediate School (7-8) - 2100 Avenida de las Flores, Thousand Oaks
- Redwood Intermediate School (7-8) - 233 West Gainsborough Road, Thousand Oaks
- Sequoia Intermediate School (7-8) - 2855 Borchard Road, Newbury Park

High Schools include:

- Conejo Valley High School (9-12) - 1872 Newbury Road, Newbury Park
- Newbury Park High School (9-12) - 456 North Reino Road, Newbury Park
- Thousand Oaks High School (9-12) - 2323 Moorpark Road, Thousand Oaks
- Westlake High School (9-12)- 100 North Lakeview Canyon Road, Westlake Village

Adult Education:

- Conejo Valley Adult School - 1025 Old Farm Rd., Thousand Oaks

(2) Fillmore Unified School District, 627 Sespe Avenue, Fillmore.

Elementary Schools include:

- Piru School (K-6) - 3811 East Center Street, Piru
- San Cayetano School (K-3) - 514 Mountain View St., Fillmore
- Sespe School (K, 4-6) - 425 Orchard St., Fillmore

Junior High School:

- Fillmore Junior High School (7-8) - 615 Shiells Drive, Fillmore

High School:

- Fillmore Senior High School (9-12) - 555 Central Avenue, Fillmore

Continuation High School:

- Fillmore Community School (9-12) - 532 "A" Street, Fillmore

Adult Education:

- Fillmore Community School - 532 "A" St., Fillmore

(3) Moorpark Unified School District, 30 Flory Avenue, Moorpark.

Elementary Schools include:

- Campus Canyon (K-3) - 15300 Monroe Avenue, Moorpark
- Flory School (4-5) - 240 Flory Avenue, Moorpark
- Mountain Meadows (K-2) - 4200 Mountain Meadow Drive, Moorpark
- Peach Hill (K-3) - 13400 Christian Barrett Drive, Moorpark
- New Elementary School (3-5) - 4117 Countryhill Road, Moorpark

Middle School:

- Chaparral Middle School (6-8) - 280 Poindexter Avenue, Moorpark

High School:

- Moorpark High School (9-12) - 4500 Tierra Rejada Rd., Moorpark.

Community High School:

- Moorpark Community High School (9-12) - 280 Casey Rd., Moorpark

(4) Oak Park Unified School District, 5801 East Conifer St., Agoura.

Elementary Schools:

- Brookside School (K-5) - 165 North Satinwood Avenue, Agoura
- Oak Mills School (K-5) - 1010 Kanan Rd., Agoura

Middle School:

- Medea Creek Middle School (6-8) - 899 North Kanan Road, Agoura

High School:

- Oak Park High School (9-12) - 899 North Kanan Road, Agoura

Continuation High School:

- Oak View High School (9-12) - 5701 East Conifer St., Agoura

(5) Ojai Unified School District, 414 East Ojai Avenue, Ojai.

Elementary Schools include:

- Meiners Oak School (K-6) - 400 South Lomita Avenue, Ojai
- Mira Monte School (K-6) - 1216 Loma Drive, Ojai
- San Antonio School (1-6) - 650 Carne Road, Ojai
- Summit School (K-6) - 12525 Ojai-Santa Paula Road, Ojai
- Topa Topa School (K-6) - 916 Mountain View, Ojai

Junior High School:

- Matilija Junior High School (7-8) - 703 El Paseo Road, Ojai

High School:

- Nordhoff High School (9-12) - 1401 Maricopa Highway, Ojai

Continuation High School:

- Chaparral Continuation High School (9-12) - 114 North Montgomery Ave., Ojai

Adult and Community Education:

- Adult and Community Education - 114 North Montgomery Ave., Ojai

(6) Simi Valley Unified School District, 875 East Cochran Street, Simi Valley.

Elementary Schools include:

- Abraham Lincoln School (K-6) - 1220 Fourth Street, Simi Valley
- Atherwood School (K-6) - 2350 East Greensward St., Simi Valley
- Berylwood School (K-6) - 2300 Heywood St., Simi Valley
- Big Springs School (K-6) - 3401 Big Springs Avenue, Simi Valley
- Crestview School (K-6) - 900 Crosby Avenue, Simi Valley
- Garden Grove School (K-6) - 2250 North Tracy Avenue, Simi Valley
- Hollow Hills Fundamental School (K-6) - 828 Gibson Avenue, Simi Valley
- Justin School (K-6) - 2245 North Justin Avenue, Simi Valley
- Katherine School (K-6) - 5455 Katherine Street, Simi Valley
- Knolls School (K-6) - 6334 Katherine Road, Simi Valley
- Madera School (K-6) - 250 Royal Avenue, Simi Valley
- Mountain View School (K-6) - 2925 Fletcher Avenue, Simi Valley
- Park View Center School (K-6) - 1500 Alexander St., Simi Valley
- Santa Susana School (K-6) - 4300 Apricot Road, Simi Valley
- Simi School (K-6) - 2956 School Street, Simi Valley
- Sycamore School (K-6) - 2100 Ravenna St., Simi Valley
- Township School (K-6) - 4101 Township Avenue, Simi Valley
- Vista Fundamental School (K-6) - 2175 Wisteria Street, Simi Valley
- White Oak School (K-6) - 2201 Alscot Avenue, Simi Valley

Junior High Schools include:

- Hillside Junior High School (7-9) - 2222 East Fitzgerald Road, Simi Valley
- Sequoia Junior High School (7-9) - 3570 Cochran St., Simi Valley
- Sinaloa Junior High School (7-9) - 601 Royal Avenue, Simi Valley
- Valley View Junior High School (7-9) - 3347 Tapo Street, Simi Valley

High Schools include:

- Royal High School (10-12) - 1402 Royal Avenue, Simi Valley
- Simi Valley High School (10-12) - 5400 Cochran St., Simi Valley

Continuation High School:

- Apollo Continuation High School (10-12) - 3150 School St., Simi Valley

Adult Education:

- Adult Education - 3192 Los Angeles Avenue, Simi Valley

(7) Ventura Unified School District, 295 South Arcade Drive, Ventura.

Elementary Schools include:

- Arnaz School (K-5) - 400 Sunset Avenue, Oak View
- Elmhurst School (K-5) - 5080 Elmhurst St., Ventura
- Foster, E.P. School (K-5) - 20 Pleasant Place, Ventura
- Juanamaria School (K-5) - 100 South Crocker Avenue, Ventura
- Lincoln School (K-5) - 1107 East Santa Clara, Ventura
- Loma Vista School (K-5) - 300 Lynn Drive, Ventura
- Montalvo School (K-5) - 2050 Grand Avenue, Ventura
- Mound School (K-5) - 455 South Hill Road, Ventura
- Oak View School (K-5) - 555 Mahoney St., Oak View
- Pierpont School (K-5) - Martha's Vineyard Court, Ventura
- Poinsetta School (K-5) - 350 North Victoria Avenue, Ventura
- Portola School (K-5) - 1350 Partridge St., Ventura
- Blanche Reynolds School (K-5) - 450 Valmore Avenue, Ventura
- Will Rogers School (K-5) - 316 Howard Street, Ventura
- Saticoy School (K-5) - 760 Jazmin Avenue, Ventura
- Junipero Sierra School (K-5) - 8880 Halifax, Ventura
- Sheridan Way School (K-5) - 573 Sheridan Way, Ventura

Middle Schools include:

- Anacapa Middle School (6-8) - 100 South Mills Avenue, Ventura
- Balboa Middle School (6-8) - 274 Hill Road, Ventura
- Cabrillo Middle School (6-8) - 1426 East Santa Clara St., Ventura
- De Anza Middle School (6-8) - 2060 Cameron Street, Ventura

High Schools include:

- Buena High School (9-12) - 5670 Telegraph Road, Ventura
- Ventura High School (9-12) - 2155 East Main Street, Ventura

Continuation High School:

- Mar Vista Continuation/Opportunity School (7-12) - 501 College Drive, Ventura

Adult Education:

- Ventura Adult Education - 501 College Drive, Ventura

Off-Campus Center:

- Off-Campus Center - 150 North Day Road, Ventura

4.9.1.2 Elementary School Districts in Ventura County (K-8) include:

- Hueneme Elementary School District (Oxnard, Port Hueneme and Hollywood Beach, approx. 7,100 students)
- Ocean View Elementary School District (Southern Ventura County and Santa Monica Mountains, approx. 2,300 students)
- Oxnard Elementary School District (Oxnard area and beach areas, approx. 12,200 students)
- Rio Elementary School District (El Rio, approx. 2,500 students)
- Mesa Union Elementary School District (area between Saticoy and Somis, approx. 350 students)
- Pleasant Valley Elementary School District (Camarillo Heights, Santa Rosa and Las Posas Valleys, approx. 6,400 students)
- Somis Union Elementary School District (Somis, approx. 300 students)
- Briggs Elementary School District (west of Santa Paula, approx. 300 students)
- Mupu Elementary School District (north of Santa Paula, approx. 100 students)
- Santa Clara Elementary School District (east of Santa Paula, approx. 30 students)
- Santa Paula Elementary School District (city of Santa Paula, approx. 3,100 students)

Each of these district and their school facilities are described below:

(1) Hueneme Elementary School District, 205 North Ventura Road, Port Hueneme.

Elementary Schools include:

- Bard, Richard School (K-6) - 622 East Pleasant Valley Road, Port Hueneme
- Hathaway, Julien G. (K-6) - 405 East Dollie Street, Oxnard
- Haycox, Art School (K-6) - 5400 Perkins Road, Oxnard
- Hollywood Beach (K-6) - 4000 Sunset Lane, Oxnard
- Hueneme School (K-6) - 344 North Third St., Port Hueneme
- Larsen, Ansgar School (K-6) - 550 East Thomas Avenue, Oxnard
- Parkview Schools (K-6) - 1416 Sixth Place, Port Hueneme
- Sunkist School (K-6) - 1400 Teakwood St., Oxnard
- Williams, Fred School (K-6) - 4300 Anchorage St., Oxnard

Intermediate Schools include:

- Blackstock, Charles School (6-8) - 701 Bard Road, Oxnard
- Green, E.O. School (6-8) - 3739 South "C" St., Oxnard

(2) Ocean View Elementary School District, 2382 Etting Road, Oxnard.

Elementary Schools include:

- Laguna Vista School (K-5) - 5084 Etting Road, Oxnard
- Mar Vista School (K-5) - 2382 Etting Road, Oxnard
- Tierra Vista School (K-5) - 2001 Sanford St., Oxnard

Junior High School:

- Ocean View Junior High School (6-8) - 4300 Olds Road, Oxnard

Special Education:

- Children's Center - 5201 Squires Drive, Oxnard

(3) Oxnard Elementary School District, 1051 South "A" St., Oxnard.

Elementary Schools include:

- Curren, Bernice School (K, 4-6) - 1101 North "F" St., Oxnard
- Driffill School (K-6) - 910 South "E" Street, Oxnard
- Elm Street School (K, 4-6) - 450 East Elm St., Oxnard
- Harrington, Norma School (K-3) - 2501 South Gisler Ave., Oxnard
- Juanita School (K-3) - 224 N. Juanita Ave., Oxnard
- Kamala School (K-6) - 634 West Kamala St., Oxnard
- Lemonwood School (K-6) - 2200 Carnegie Ct, Oxnard
- Marina West School (K-3) - 2501 Carob St., Oxnard
- McAuliffe School (K-5) - 3300 West Via Marina Ave., Oxnard
- McKinna, Dennis School (K-6) - 1611 South "J" St., Oxnard
- Ramona School (K-3) - 804 Cooper Road, Oxnard
- Rose Avenue School (K, 4-6) - 220 S. Driskill Ave., Oxnard
- Sierra Linda School (K, 4-6) - 2201 Jasmine Ave., Oxnard

Intermediate Schools include:

- Fremont, John Charles Intermediate School (7-8) - 1130 North "M" St., Oxnard
- Haydock, Richard Barrett Intermediate School (7-8) - 647 West Hill St., Oxnard
- Nueva Vista Alternative Education (7-8) - 925 South "A" Street, Oxnard

Special Education:

- San Miguel School (K-6) - 2400 South "J" Street, Oxnard

(4) Rio Elementary School District, 3300 Cortez St., Oxnard (El Rio).

Elementary Schools include:

- El Rio School (K-6) - 2714 Vineyard Ave., Oxnard (El Rio)
- Rio Lindo School (K-6) - 2131 Snow Ave., Oxnard (El Rio)
- Rio Plaza School (K-6) - 600 Simon Way, Oxnard (El Rio)
- Rio Real School (K-6) - 1140 Kenny St., Oxnard (El Rio)

Junior High Schools include:

- Rio Del Valle School (7-8) - 3100 Rose Avenue, Oxnard (El Rio)
- Rio Vista Opportunity School (7-8) - 3334 Santa Clara Ave., Oxnard

(5) Mesa Union Elementary School District, 3901 North Mesa School Road, Somis.

- Mesa School (K-8) - 3901 North Mesa School Road, Somis

(6) Pleasant Valley Elementary School District, 600 Temple Ave., Camarillo.

Elementary Schools include:

- Bedford Open School (K-6) - 1099 North Bedford St., Camarillo
- Camarillo Heights School (K-6) - 35 Catalina Drive, Camarillo
- Dos Caminos School (K-6) - 3635 Appian Way, Camarillo Dos Caminos School Fundamental Program K-6
- El Descanso School (K-6) - 1099 North Bedford St., Camarillo
- El Rancho School (K-6) - 600 Temple Avenue, Camarillo
- Las Colinas School (K-6) - 5750 Fieldcrest Drive, Camarillo
- Las Posas School (K-6) - 75 Calle La Guerra, Camarillo
- Los Nogales School (K-6) - 1555 North Kendall Avenue, Camarillo
- Los Primeros School (K-8) - 2222 Ventura Blvd., Camarillo
- Santa Rosa School (K-6) - 13282 Santa Rosa Road, Camarillo
- Valle Lindo School (K-6) - 777 Aileen

Intermediate Schools include:

- Los Altos Intermediate School (7-8) - 700 Temple Ave., Camarillo
- Monte Vista Intermediate School (7-8) - 888 North Lantana St., Camarillo

(7) Somis Union Elementary School District, 5628 North St., Somis.

- Somis School (K-8) - 5628 North St., Somis

(8) Briggs Elementary School District, 14438 Telegraph Rd., Santa Paula.

Elementary Schools include:

- Briggs School (4-8) - 14438 Telegraph Road, Santa Paula
- Olivelands School (K-3) - 12465 Foothill Road, Santa Paula

(9) Mupu Elementary School District, 4410 North Ojai Road, Santa Paula.

- Mupu School (1-8) - 4410 North Ojai Road, Santa Paula

(10) Santa Clara Elementary School District, 20030 East Telegraph Road, Santa Paula.

- Santa Clara School (K-6) - 20030 East Telegraph Road, Santa Paula

(11) Santa Paula Elementary School District, 144 North Davis Street, Santa Paula.

Elementary Schools include:

- Bedell, Thelma B. School (K-5) - 1305 Laurel Road, Santa Paula
- Blanchard School (K-5) - 115 Peck Rd., Santa Paula
- Glen City School (K-5) - 141 South Steckle Drive, Santa Paula
- McKevett School (K-5) - 955 Pleasant St., Santa Paula
- Portal School (K-6) - 305 North 11th St., Santa Paula
- Thille, Grace S., School (K-5) - 1144 Ventura St., Santa Paula
- Webster, Barbara, School (K-5) - 1150 Saticoy St., Santa Paula

Junior High School:

- Isbell School (6-8) - 221 South Fourth St., Santa Paula

Special Education:

- Child Development Center - 1111 East Santa Paula St., Santa Paula

4.9.1.3 High School Districts (9-12)

High School Districts serve Oxnard, Camarillo, Port Hueneme and Santa Paula areas. Each of these districts and their school facilities are described below:

(1) Oxnard Union High School District (approx. 12,600 students)

The Oxnard Union High School District serves the Oxnard, Port Hueneme and Camarillo areas including the following elementary school districts: Hueneme, Mesa Union, Ocean View, Oxnard, Pleasant Valley, Rio and Somis Union. The District Office is located at 309 South "K" Street, Oxnard.

High Schools include:

- Camarillo, Adolfo High School (9-12) - 4660 Mission Oaks Blvd., Camarillo
- Channel Islands High School (9-12) - 1400 East Raiders Way, Oxnard
- Hueneme High School (9-12) - 500 Bard Road, Oxnard
- Oxnard High School (9-12) - 937 West Fifth St., Oxnard
- Rio Mesa High School (9-12) - 545 Central Ave., Oxnard

Continuation School:

- Frontier Continuation Education/Alternative Education (9-12) - East Pleasant Valley and Las Posas Roads, Camarillo

Adult Education:

- Oxnard High Adult Education School - 935 West Fifth St., Oxnard

(2) Santa Paula Union High School District (approx. 1,200 students)

The Santa Paula Union High School District serves the Santa Paula area including the Briggs, Mupu, Santa Clara and Santa Paula Elementary School Districts. The District Office is located at 404 North Sixth St., Santa Paula.

High School:

- Santa Paula Union High School (9-12) - 404 N. Sixth St., Santa Paula

Continuation Education:

- Renaissance Continuation Education (9-12) - 404 North Sixth St., Santa Paula

Adult Education:

- Adult School - 404 North Sixth St., Santa Paula

Special Education:

- District Alternative Programs - 404 North Sixth St., Santa Paula

4.9.1.4 North Half

In addition, the Cuyama Joint Union District serves the extreme northwest corner of the County, with the major portion of the district in Santa Barbara County. The elementary school is in Cuyama in Santa Barbara County. Other elementary students in the North Half attend school in El Tejon or in Frazier Park in Kern County. The Fillmore Unified School District contracts with Kern County for school services for the children of Lockwood Valley. The North Half is divided into the Santa Paula and Santa Maria Union High School Districts, with the Lockwood Valley High School students attending high school in Bakersfield under a contract between Fillmore High School and Kern County.

4.9.2 VENTURA COUNTY SUPERINTENDENT OF SCHOOLS OFFICE SERVICES

The Ventura County Superintendent of Schools Office serves as an intermediate unit between the state and local school districts. The primary role of the office is to promote quality educational services to all students by providing leadership, support, assistance, and coordination to school districts and county operated programs through the provisions of administrative, educational, fiscal and clerical services. The Ventura County Superintendent of Schools Main Office is located at 535 E. Main Street, Ventura. The Ventura County Superintendent of Schools Office provides the following services:

- Regional Occupational Program

  The Regional Occupational Program prepares students from throughout Ventura County for the transition from school to work by developing work maturity skills, self-confidence, and independence through quality occupational education, training, and support services. Fourteen programs are operated at the Camarillo Airport and nine satellite programs are operated at local schools and private

industry sites. The Regional Occupational Program is administered at the Camarillo Airport, 465 Horizon Circle, Camarillo.

- Special Education

  The Ventura County Superintendent of Schools (VCSS) operates special education programs for students from preschool age through age 21. Support services to the programs include psychological services, speech and language services, audiological services, health services, adapted physical education services, and transportation. Special education programs are offered at various locations throughout the County.

- Gateway Community School

  The Gateway Community School, a year-round school, serves students from grades 7 through 12. Community school students are served on independent study contracts, working one-on-one with the teacher, as a team, to promote student achievement and success. Typically, students work toward graduation or they try to catch up academically so they may return on schedule to their local school. Most are students that have experienced difficulty in the traditional school setting and/or at home, and are in need of a program that provides individual and personal attention. The Gateway Community School is located at the Camarillo Airport. Two branch programs of Gateway, CAP and VIP, are located in Ventura and offer a specific alternative educational service to high risk youth in the local area.

- Court Schools

  The Ventura County Superintendent of Schools has three Juvenile Court Schools which provide year-round educational programs to incarcerated youth in each of Ventura County's Correctional Facilities. The three schools, all located in Ventura, and their respective facilities are: Marguerite McBride School (Clifton Tatum Center or Juvenile Hall), Ventura; Frank A. Colston School (Colston Youth Center), Ventura; Juvenile Restitution Project (Work Release Center), Ventura. The three schools have developed a curriculum and instructional approach designed to best fit the needs of their students and complement the overall purpose of the particular correctional facility.

4.9.3 PUBLIC COMMUNITY COLLEGES

The Ventura County Community College District (71 Day Road, Ventura) is responsible for providing public community college education in Ventura County. The Community College District, which was formed in 1962, operates three colleges: Ventura College founded in 1925 (4667 Telegraph Road), Moorpark College founded in 1963 (7075 Campus Road) and Oxnard College opened in 1975 (4000 South Rose Avenue). These colleges serve all communities in the County, except for an area in the northwestern part of the County served by the Kern Community College District.

Overall enrollment in the three community colleges in the Fall semester of 1992 was 29,704. This includes 11,578 day and evening students at Moorpark College, 6,388 day and evening students at Oxnard College, and 13,061 day, evening, and non-credit students at Ventura College.

The Ventura County Community College District sets as its goals and accepts responsibility for meeting the educational needs of all eligible students who enter its colleges by offering the most comprehensive programs and services possible. The District's colleges are to be open to all eligible students who can profit from instruction. The District encourages its three colleges to develop independently, and with a flexibility sufficient to respond to changing student and community needs. The colleges provide general education, transfer to four-year colleges and universities, occupational and developmental programs, guidance, and continuing education.

4.9.4 PRIVATE SCHOOLS

Private education is available at all levels in Ventura County. The following is a list of private schools having an enrollment of at least ten students:

4.9.4.1 Private Elementary and High Schools:

The County Superintendent of Schools maintains a list of all private schools located in Ventura County. For the 1990-91 school year, there were a total of 202 private schools located in the County. The 83 schools having an enrollment of at least 10 students are listed below:

- Arroyo Montessori (K-6) - 225 Ulysses Street, Simi Valley
- Ascension Lutheran Elementary School (K-8) - 1600 Hillcrest Drive, Thousand Oaks
- Assistance League School (K) - 1310 Fremont Way, Oxnard
- Bethany Christian Elementary (K-6) - 200 W. Bethany Ct., Thousand Oaks
- California Learning Center of Thousand Oaks (1-4) -1459 Thousand Oaks Blvd., Thousand Oaks
- Camarillo Montessori School (K) - 3701 Las Posas Rd.
- Carden School of Camarillo (K-8) - 1915 E. Las Posas Road, Camarillo
- Children's Place, The (K) - 2304 Antonio Avenue, Camarillo
- Children's World Learning Centers (K), 5165 Cochran St., Simi Valley
- Christian Nursery Kindergarten (K) - 301 Avenue De Las Flores, Thousand Oaks
- Cochran Baptist School (K-6), 4910 Cochran St., Simi Valley
- College Heights Christian Elementary (K-7) - 6360 Telephone Road, Ventura
- Community Christian School (K-8) - 723 South D Street, Oxnard
- Conejo Adventist Elementary (K-6) - 2645 W. Hillcrest Dr., Newbury Park
- Cornerstone Christian School (K-12) - 1777 Arneill Rd., Camarillo
- Discovery Place (1-6) - 10239 Ojai-Santa Paula Road, Ojai
- First Baptist Academy (K-10) - 1250 Erbes Road, Thousand Oaks
- First Baptist Day School (K-3), 426 South Mills Rd., Ventura
- First Lutheran School (K-3), 380 Arneill Rd., Camarillo
- Friends Elementary (K-4) - 3503 Arundell Circle, Suite A, Ventura
- Grace Brethren School (K-9) - 1717 Arcane, Simi Valley
- Grace Lutheran Christian Day School (K-5) - 6190 Telephone Road, Ventura
- Great Pacific Child Development Center (K) - 255 West Santa Clara, Ventura
- Green Valley Child Development Center (K) - 1924 Cochran Street, Simi Valley
- G.T. Water Products - Private School (1-10) - 5239 No. Commerce Ave., Moorpark
- Harvest Christian School (K-8) - 44 Beverly Dr., Camarillo
- Heritage Christian Academy (K-12) - 190 E. El Roblar, Ojai
- Herman Lewis Christian Academy (K-12) - 406 Acacia Rd., Santa Paula
- Hillcrest Christian School (K-12) - 384 Erbes Road, Thousand Oaks
- Holy Cross (K-8) - 183 E. Main St., Ventura
- Honey Tree Kindergarten (K) - One W. Avenida De Los Arboles, Thousand Oaks
- Hueneme Christian School (K-8) - 312 N. Ventura Road, Port Hueneme
- Intergate Academy of Arts & Sciences (K-5) - 2700 Borchard Road, Newbury Park
- John Jenkins Christian Academy/Preschool (K-12) - 217 North 10th Street, Santa Paula
- Kinder Care Learning Center (K) - 2425 Oakbrook Dr., Thousand Oaks
- La Reina High School (7-12) - 106 W. Janss Road, Thousand Oaks
- Lakeview Canyon Private School (7-12) - 150 Via Merida, Thousand Oaks
- Linda Vista Junior Academy (K-10) - 5050 Perry Way, Oxnard
- Little Oaks Montessori School (K-4) - 101 North Skyline Drive, Thousand Oaks
- Mary Law Private Elementary (K-6) - 2931 Albany Drive, Oxnard

- Master's School, The (K-12) - 1863 East Bancrost St., Camarillo
- Monica Ros School (K-3) - 783 McNell Road, Ojai
- Newbury Park Adventist Academy (9-12) - 180 Academy Drive, Newbury Park
- Oak Grove School of Krishnamurti (K-12) - 220 W. Lomita, Ojai
- Oak Meadow School (K-12) - 409 Topa Topa, Ojai
- Oak Meadow High School (9-12) - 409 Topa Topa, Ojai
- Oak View School House (K-12), - 655 Santa Ana Blvd., Oak View
- Ojai Seventh-Day Adventist School (1-8) - 291 East El Roblar Dr., Ojai
- Ojai Valley Children's House (K-6) - 806 W. Baldwin Road, Ojai
- Ojai Valley School (K-12) - 723 El Paseo Road, Ojai
- Our Lady of Guadalupe Elementary (K-8) - 530 N. Juanita Avenue, Oxnard
- Our Lady of the Assumption (K-8) - 3169 Telegraph Road, Ventura
- Peppermint Junction Children's Center, Inc. (K-3) - 2700 Buckaroo Ave. No. 8, Oxnard
- Phoenix Ranch School (K-1) - 5928 Los Angeles Ave., Simi Valley
- Pinecrest School (K-5) - 4974 Cochran Street, Simi Valley
- Pinecrest School (K-6) - 449 Wilbur Road, Thousand Oaks
- Rolling Oaks Child Development Center - 400 E. Rolling Oaks Drive, Thousand Oaks
- Sacred Heart School (K-8) - 10770 Henderson Road, Ventura
- Santa Clara Elementary (K-8) - 324 South E Street, Oxnard
- Santa Clara High School (9-12) - 2121 Saviers Road, Oxnard
- Santa Paula Christian (K-12) - 203 South Eighth Street, Santa Paula
- Simi Valley Christian Day Elementary (K) - 4200 Township, Simi Valley
- Simi Valley Seventh Day Adventist School (K-8) - 1636 Sinaloa Road, Simi Valley
- St. Anthony's Elementary (1-8) - 2421 South "C" Street, Oxnard
- St. Bonaventure High School (9-12) - 3167 Telegraph Road, Ventura
- St. John's Lutheran Elementary (K-8) - 1500 N. "C" Street, Oxnard
- St. Mary Magdalene (1-8) - 2534 Ventura Blvd., Camarillo
- St. Paschal Baylon Elementary (1-8) - 154 E. Janss Road, Thousand Oaks
- St. Patrick's Parish Day Elementary (K-6) - One Church Road, Thousand Oaks
- St. Paul's Parish Day Elementary (K-8) - 3290 Loma Vista Road, Ventura
- St. Rose of Lima Elementary (1-8) - 1325 Royal Avenue, Simi Valley
- St. Thomas Aquinas (K-8) - 210 Canada Street, Ojai
- Temple Christian School (K-8) - 5415 Ralston, Ventura
- Thacher School, The (9-12) - 5025 Thacher Road, Ojai
- Trinity Pacific Christian School (K-12) - 3964 Greenwood St., Newbury Park
- United Methodist Children's Center, (K) - 1801 Joilet Place, Oxnard
- Ventura Christian (K-5) - 5040 Telegraph Rd., Ventura
- Ventura Missionary Christian Day School (K-8) - 500 High Point Drive, Ventura
- Villanova Preparatory School (9-12) - 12096 Ventura Avenue, Ojai
- West Side Academy (K-12) - 973 La Grange, Newbury Park

4.9.4.2 Private Colleges:

Private colleges are located in Camarillo (St. John's Seminary College - 5012 E. Seminary Rd., Camarillo), rural Santa Paula/Ojai (Thomas Aquinas College - 10000 N. Ojai Rd., Santa Paula) and Thousand Oaks (California Lutheran University - 60 W. Olsen Rd., Thousand Oaks).

4.9.5 LIBRARY SERVICES

4.9.5.1 Ventura County Library Services Agency

Ventura County is served by four independent public library jurisdictions: Ventura County Library Services Agency, the City of Oxnard, Santa Paula Union High School District and the City of Thousand Oaks. In addition, the Ventura County Law Library is open to the public.

This section will be limited to a discussion of the County Library Services Agency which provides service to all of Ventura County except Oxnard, Santa Paula and Thousand Oaks. The agency provides to all individuals free access to books, other materials and services to support their informational, recreational, cultural and self-education needs. Most books and materials are available to be loaned to users. Information service is provided by trained staff. In addition, an Adult Literacy Program operates at multiple sites using one-to-one tutoring with trained volunteers.

Sixteen libraries are operated by the County Library Service Agency. The County Library's administrative office is located at 4274 Telegraph Road, Ventura. Its Central Services operations are located at 651 East Main Street, Ventura.

The goals of the Library Services Agency are to:

- Provide excellent basic public service within the constraints of resources available.
- Strengthen agency staff support.
- Provide safe, clean, well-lighted, attractive, accessible, spacious facilities in good repair.
- Increase public awareness of and support for library services.

4.9.5.2 Black Gold Cooperative Library System

Seven member public libraries in Ventura, Santa Barbara and San Luis Obispo counties share resources and information through the Black Gold Cooperative Library System. The Black Gold Bibliographic Center catalogs books acquired by member libraries, and publishes a union catalog of books for the libraries. The Black Gold Information Center provides backup reference and information service to members.

On August 29, 1978, the Ventura County Board of Supervisors authorized the Library Services Agency to participate in the programs of the California Library Services Act. The Act requires appointment of a community representative to the Black Gold System Advisory Board. Board members play a significant role in helping determine the library services to be given to the residents of the Tri-County area by the Black Gold Cooperative Library System.

4.9.5.3 Ventura County Law Library

The Law Library is located on the first floor of the Hall of Justice at the County Government Center. Its collection of books, journals and other publications are accessible for examination and reading by the public. Its primary use is by the judiciary, State and County officials and members of the Bar Association. This library is governed by the Law Library Board of Trustees, consisting of three Superior Court Judges, one Municipal Court Judge and two members of the Bar appointed by the Board of Supervisors.

4.9.6 FUTURE PUBLIC SCHOOL FACILITIES

Planning for future school facilities appropriately occurs on a district-by-district basis, where local needs and resources can be fully evaluated. However, information available as of 1987 indicated that the principal short-term need is likely to be for construction of new classrooms on existing occupied sites, while long-term needs are for additional sites for new schools and related facilities. At the request of the County Planning Division, the County Superintendent of Schools Office conducted a survey of all County Public Schools in the Summer of 1987, surveying each School District's anticipated school facility needs to the year 2000.

Refer to Figure 4.9.3 for the additional school facilities needed by the year 2000 for each school district, as information to the year 2010 was unavailable at this time.

Effective January 1, 1987, new State Legislation AB 2926 (Stirling) established a State and local partnership for the financing of school construction, declaring legislative intent that the State's share of its financial commitment will be met from such revenue sources as general obligation bonds, tideland oil revenues, and from other sources specified in the bill. AB 2926 also authorizes local school districts to impose fees on residential and commercial developers to finance school construction. Cities and counties would continue to be authorized to levy fees or require the dedication of land in order to finance specified interim facilities. However, such fees could not exceed $1.50 per square foot for residential development and $0.25 per square foot for commercial and industrial developments.

In September 1987, according to the County Superintendent of Schools Office, of the 20 Public School Districts in the County, 17 School Districts collected AB 2926 school fees. The Santa Clara Elementary School District and the Simi Valley Unified School District currently do not collect school development fees, and Oak Park Unified School collects its school fees by private agreement.

Prior to January 1, 1987, SB 201 permitted each School District to collect school impact fees from the developers of new residential construction with many of the School Districts utilizing school impact fees.

4.9.7 CONCLUSIONS

4.9.7.1 Schools

Planning for future school facilities occurs on a district by district basis. The County's role is to assist public school districts and private schools with administrative, fiscal and education affairs and implementation of special programs and legislative mandates. The General Plan Goals, Policies and Programs should promote the continued exchange of information, such as providing demographic data through the Development Monitoring Program and current development activity to help school districts in estimating future needs.

4.9.7.2 Libraries

With an expanding population, growth in leisure time, higher educational goals and attainment, the public library is an important community facility. It often provides a focal point of education and community awareness. The General Plan Goals, Policies and Programs should provide a means to ensure that a high level of library facilities and services will continue to be provided for existing and future County residents.

REFERENCES

Ventura County Superintendent of Schools Office, 1986-87 Ventura County Public Schools Directory.

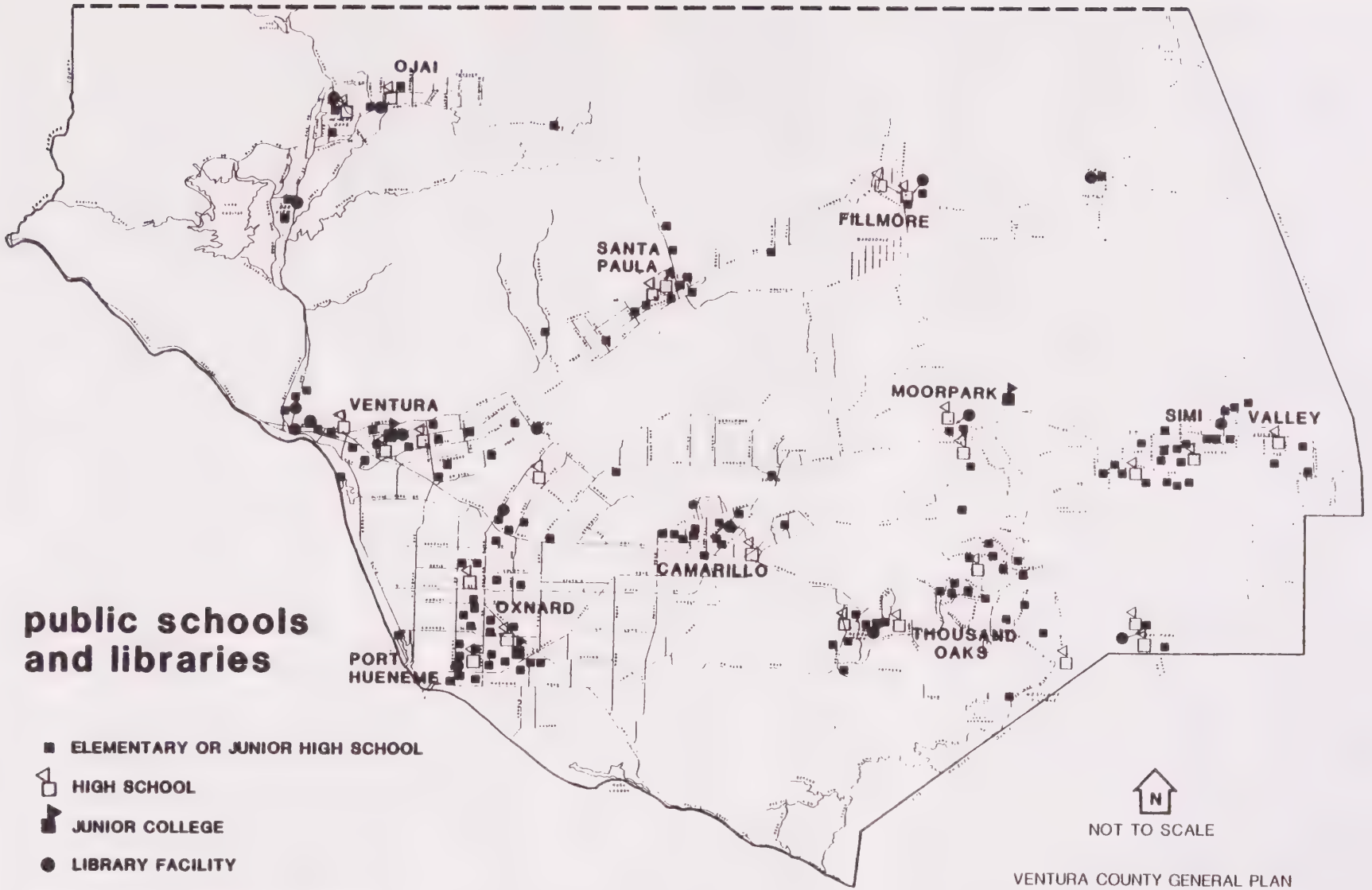
Ventura County Superintendent of Schools Office, Private and Parochial Schools in Ventura County 1990-91.

Library Services Agency Goals and Objectives 1986-87.

Ventura County Superintendent of Schools Office Goals and Objectives 1986-87.

INDIVIDUALS CONSULTED

Dixie D. Adeniran, Ventura County Director of Library Services
Dr. James F. Cowan, Ventura County Superintendent of Schools
John Elmore, Ventura County Library Services Agency
Dr. Alfred Fernandez, Chancellor, Ventura County Community College District
Tom Kimberling, Ventura County Community College District
Robert Smith, Ventura County Superintendent of Schools



VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.9.1

FIGURE 4.9.2
VENTURA COUNTY LIBRARY SERVICES AGENCY - LIBRARIES

ADMINISTRATION 4274 Telegraph Rd. Ventura 93003	Number of Volumes
CENTRAL SERVICES 651 E. Main St. Ventura, CA 93001	48,658
AVENUE LIBRARY 807 N. Ventura Ave. Ventura 93001	18,700
CAMARILLO LIBRARY 3100 Ponderosa Dr. Camarillo 93010	97,953
FILLMORE LIBRARY 502 Second St. Fillmore 93015	27,679
E. P. FOSTER LIBRARY 651 E. Main St. Ventura 93001	109,271
HISTORICAL MUSEUM LIBRARY* 100 E. Main St. Ventura 93001	
MEINERS OAKS LIBRARY 114 N. Padre Juan Ave. Meiners Oaks 93023	16,200
MOORPARK LIBRARY 699 Moorpark Ave. Moorpark 93021	32,461
OAK PARK LIBRARY 899 N. Kanan Rd. Agoura 91301	15,679
OAK VIEW LIBRARY 469 N. Ventura Ave. Oak View 93022	19,509
OJAI LIBRARY 111 E. Ojai Ave. Ojai 93023	45,157
PIRU LIBRARY 3811 E. Center St. Piru 93040	18,430
PRUETER PORT HUENEME LIBRARY 510 Park Ave. Port Hueneme 93041	50,643
SATICOY LIBRARY (Temporarily closed)	14,700
SIMI VALLEY LIBRARY 2969 Tapo Canyon Rd. Simi Valley 93063	138,031
SOLIZ EL RIO LIBRARY 3100 Ponderosa Dr. Camarillo 93010	18,594
H. P. WRIGHT LIBRARY 57 Day Rd. Ventura 93003	93,861

*Cost of staffing shared by the Ventura County Historical Society
Source: Ventura County Library Services Agency, 12/92

FIGURE 4.9.3

ADDITIONAL SCHOOL FACILITIES FOR VENTURA COUNTY
PUBLIC SCHOOL DISTRICTS NEEDED BY YEAR 2000

ELEMENTARY SCHOOL DISTRICTS	
Briggs Elementary School District	None Indicated
Hueneme Elementary School District	None Indicated
Mesa Union Elementary School District	Mesa Union School District has an 11-acre parcel of land in Strickland Acres for future facility development.
Mupu Elementary School District	None Indicated
Ocean View Elementary School District	1 Elementary School K-5, Ormond Beach area
Oxnard Elementary School District	4 Elementary Schools K-6 1 Intermediate School 7-8
Pleasant Valley Elementary School District	Additions will be made to existing schools. Also, potential for 1 Elementary School, K-6 in Eastern Camarillo
Rio Elementary School District	2 Elementary Schools K-6 1 Intermediate School 7-8
Santa Clara Elementary School District	None Indicated
Santa Paula Elementary School District	Kindergarten - 2 classrooms First Grade - 3 classrooms Second Grade - 3 classrooms Third Grade - 3 classrooms Fourth Grade - 2 classrooms Fifth Grade - 2 classrooms Library Facilities - 2 rooms Multi-Purpose Room - 1 Cafeteria - 1 District Office - 1
Somis Union Elementary School District	None Indicated
HIGH SCHOOL DISTRICTS	
Oxnard Union High School District	2 High Schools 9-12 Relocation of Oxnard High School
Santa Paula Union High School District	Current high school may be expanded to house expected enrollment increase.
UNIFIED SCHOOL DISTRICTS	
Conejo Valley Unified School District	2 Elementary Schools K-6 1 Continuation High School 9-12
Fillmore Unified School District	2 Elementary Schools K-5 1 Middle School (6-8) to replace current junior high (7-8) which will then become a part of the high school campus
Moorpark Unified School District	1 Elementary School K-5 1 Middle School 6-8 1 Community High School 18 regular classrooms 12 portable classrooms 1 performing art building 4 shops Modernize Chaparral Middle School Modernize Flory School
Oak Park Unified School District	1 Middle School 6-8 (under construction) 1 Elementary School K-5
Ojai Unified School District	12-15 classrooms K-8 5-7 classrooms 9-12
Simi Valley Unified School District	1 Elementary School K-6 1 Adult Education Center
Ventura Unified School District	Presently working on a study of district facility needs

Source: Ventura County Superintendent of Schools Office Survey, 1990

4.10 PARKS AND RECREATION

Park and recreation facilities in Ventura County are provided by a wide array of agencies. These facilities enhance the quality of life of County residents as well as stimulate the County's tourist industry. The following sections discuss the value and need for recreation facilities, the provision of recreation facilities and lastly, present an inventory of existing and proposed facilities within the county.

4.10.1 NEED

A recreation activity usually instills a sense of well-being or fulfillment to those associated with it. This recreation experience can range from the exhilaration of personal achievement involving special skills or talent, to the serenity induced by viewing a dramatic sunset. It can come from the excitement of participation or the enjoyment of watching others at play. The intensity or quality of resultant experience will vary greatly between individuals and within the same individual under different circumstances. The recreation experience is certainly not restricted to public park areas; nor does the impact of the urban environment stop at the boundary of public land. To achieve an acceptable "living" environment within our urban centers, government should establish an ethic that encourages the blending of public open space, public recreation areas, private recreation installations, and a wide variety of public, commercial and industrial support facilities as integral units of a total plan.

Within urban regions, a definite void exists between the traditionally accepted recreation service provided by local municipalities or special districts, and the areas and facilities supplied by the state and various federal agencies. This void is a result of increased mobility, special recreation interests, intensified population concentrations, and limited amenities in the rural community. A system of regional recreation areas can help bridge this gap. Regional recreation areas protect and preserve natural resources and provide facilities that offer specialized recreation opportunities to meet the unique needs of the metropolitan area. Generally, facilities involve recreation, arts or cultural activities of a specialized nature, or offer a quality experience not normally provided by local jurisdictions at the neighborhood or community level. The resource protection capability of parks includes providing open space, providing and enhancing water resources and preserving biological, cultural and scenic resources.

A local park, on the other hand, is a facility that provides recreation opportunities, including programmed activities and/or passive leisure facilities to serve the daily needs of a defined neighborhood or group of neighborhoods within an urban community.

Within the unincorporated area of Ventura County, there are some significant areas of population concentration which are outside any district that may have need for local parks. Some of these areas are the Ventura River Valley, El Rio, Saticoy and Piru.

Contrary to many traditional planning methods, the primary factor that determines the service radii of any recreation facility is that condition that can best be identified as "attraction capability." Further, the actual drawing power of any park is not normally established by the park itself, but by the individual activity or interest facilities within that park and the degree to which they satisfy the social and recreation needs of the projected participants. The size of a recreation area, its actual location, and its basic functions are only contributing factors to the attraction capability of any facility. Attraction capability also is established by the careful combination of a selected group of recreation activity areas or facilities that cater to the family unit or to the semi-organized social group. It is essential that facilities exhibit an overall design quality that assures easy and convenient access, effective internal circulation, cohesive architectural and landscape treatment, and consideration for the problems of control, operation and maintenance. The ability to maintain consistent visitation is also dramatically influenced

by the operational factors of leadership, supervision attitude, quality of maintenance and effective programming.

Recreation demand is difficult to quantify. The physical and climatic resources of any region or sub-region will dramatically affect the participation days per capita in a wide variety of recreation activities. For example, the actual participation days per capita in backpacking, camping, water-oriented activities, snow skiing, ice skating, hunting, spectator sports, cultural events, golf, horseback riding, bicycle riding, surfing and many other leisure pursuits vary substantially in accordance with the climate, topography, extent of urbanization and the availability of unique physical resources within the study area. It can be demonstrated that the resource, whether natural or man-made, contributes to demand. As a general rule, standard participation days per capita that are developed nationally or even statewide, are of limited value in the determination of demand factors at the regional or local level.

People's interest in specific recreation activities and the degree to which they participate in these activities also are determined largely by the existing social and economic conditions that control or influence their daily lives.

The use of facilities and the participation in certain regional recreation activities are affected by public transportation and public access. A significant proportion of the County's population does not have access to recreation facilities due to inadequate private transportation. Groups so affected include the aged, economically disadvantaged, some minority groups, and the young. Certain recreational facilities such as golf courses attract car driving participants from a 10-20 mile service radius and would not be significantly affected by the availability of public transportation. However, picnic areas, County parks and beaches get a significant percentage of their use from within the County, and increased attendance by more segments of the County population could potentially be accomplished by public transportation access to these areas.

The facilities most likely to draw day use from outside the County are the lakes (mainly Casitas and Piru) and the beaches and harbors. These water based activities draw people who live an hour or more from the facility and have accounted for 47% of the use of the harbors. The beach camping areas and the County lakes draw 90% of their users from outside the County, most from the greater Los Angeles area. On the other hand, much of the use of picnic areas and golf courses is by Ventura County residents.

From the south half of the County, the Los Padres National Forest has only one major and two minor access roads. The major road is Highway 33 from Ojai. The two minor roads basically connect the south half of the County to campgrounds and trail heads. They are the Dough Flat Road from Fillmore and the Lake Piru Road to Blue Point Campground and trail head.

Within Los Padres National Forest are the Gridley Canyon, Pratt and Foothill trails which are relatively accessible and have no major problems associated with public easement.

There are other trail heads from the south half of the County to the forest which pass over private property, and no public easement or guarantee of continued public use has been secured. Therefore, all use of these trails is actually or potentially subject to interruption from the property owners. A method of obtaining public access should be secured to allow for the increasing public demand for outdoor recreation provided by the National Forest. These trail heads provide the most accessible avenue for the vast majority of the County's population to the extensive trail system of the Forest.

4.10.2 PROVISION OF RECREATION FACILITIES

Within Ventura County many agencies provide recreation facilities. The cities and Recreation and Park Districts focus on providing local park facilities. Federal, State and quasi-public agencies primarily provide

regional facilities. The County of Ventura provides regional facilities Countywide and local facilities in unincorporated urban areas. Regional and local facilities are distinguished as follows:

A regional recreation area is an extent of land which, by its unique natural character or unusual or extensive development, offers recreation opportunities that attract visitors from beyond the local vicinity without regard to physical, political or municipal boundaries.

A local park provides facilities to serve the daily needs of a defined neighborhood or group of neighborhoods within an urban community. Local parks should be able to provide at least three main types of recreation: open areas for passive recreation and relaxation; active sports areas for baseball, basketball and other court games; and a neighborhood center for groups such as Boy Scouts, senior citizens, craft classes, etc. The specific facilities should be determined by needs of the community.

Three special Recreation and Park Districts provide local recreation services to urban residents. The Pleasant Valley Recreation and Park District, the Conejo Recreation and Park District, and the Rancho Simi Recreation and Park District serve the incorporated municipalities of Camarillo, Thousand Oaks, and Simi Valley, and unincorporated areas located adjacent to their primary cities. Figure 4.10.1 shows the service areas of these districts. A number of unincorporated urban areas exist that are not within the jurisdiction of the cities or of special districts. Over 88,000 people currently reside within the unincorporated territory of Ventura County. Although some of these people receive recreation services from the existing special districts, areas such as the Ventura River Valley, El Rio, Casitas Springs, and Piru, for example, receive recreation services from Ventura County.

In addition to the cities, and Recreation and Park Districts, two independent political jurisdictions provide facilities for recreation use: the Casitas Municipal Water District with its extensive operation at Lake Casitas, and the United Water Conservation District operating facilities at Lake Piru.

The physical setting of Ventura County and its proximity to the Los Angeles metropolitan area has inspired the State of California to acquire and develop extensive recreation facilities along the coastal shoreline to relieve the continuous impact generated from out of County visitors. Ventura River Group Camp, McGrath, and Point Mugu State Parks provide overnight accommodations and specialized facilities of statewide significance. Lake Casitas and Lake Piru are also heavily used by this regular influx of visitors from the Southern California metropolitan region. The Hungry Valley State Vehicular Recreation Area is a 18,780 acre heavily used off-road vehicle use area which straddles the Los Angeles/Ventura County Line in the northeast corner of the County. Open vehicular use, trail use, competitive events and camping take place there.

In addition to State and local facilities, various Federal facilities are located within the County. The U.S. Forest Service affords recreational resources of statewide significance within its extensive holdings in the Los Padres National Forest. The Santa Monica Mountains National Recreation Area and Channel Islands National Park are also located within the County.

Regional services that emphasize day use activities are also provided by each of these levels of government. Both Lake Casitas and Lake Piru offer launching facilities for a variety of boating activities, fishing, and day use picnic areas. The State of California operates day use beaches at San Buenaventura State Beach Park, McGrath State Beach, and Point Mugu State Park.

Recreational boating, sport fishing and swim beaches are provided at the County's two ocean marinas. Channel Islands Harbor in Oxnard is operated by the Ventura County General Services Agency. The Harbor holds 2,300 small craft and future expansion is being planned. Ventura Harbor is operated by the Ventura Port District. Both offer commercially operated

recreation activities such as sport fishing, tours, scuba diving and sailing.

The County of Ventura provides recreation services through the General Services Agency. Generally, County policy is to primarily provide regional facilities which serve all residents of the County, and secondarily, to provide local recreation facilities in unincorporated urban communities. The County local park program includes community centers in El Rio and Casitas Springs and community centers with local parks in Oak View, Saticoy and Piru.

With regard to regional park facilities, the General Services Agency, Recreation Services is pursuing development of a County Regional Recreation Areas Plan. When adopted, this plan will identify facility needs, establish criteria for facility development and delineate priorities for new facilities. The County currently owns 24 regional parks.

4.10.3 RECREATION INVENTORY

The following contains a listing of existing and proposed regional recreation facilities within Ventura County. Federal facilities are described below. State, County, quasi-public and local facilities are described in tabular form in the following Figure 4.10.2. and are mapped on Figure 4.10.3.

Los Padres National Forest (LPNF): The LPNF covers the majority of the northern half of Ventura County. As part of the Forest Services Multiple Use Management strategy various recreation facilities are provided, including hiking, equestrian and off-road vehicle trails and camping areas accessible by road and trail. Figure 4.10.4 depicts recreation sites in the Forest. There are 57 dispersed trail camps, 19 developed family campgrounds and one developed group campground. There are many miles of recreation roads utilized by visitors as scenic drives and by off-highway-vehicle enthusiasts. The Forest has inventoried 373.7 total miles of trails. This includes 17.7 miles of the Gene Marshall - Piedra Blanca National Recreation Trail which begins at Reyes Creek Campground and ends at Lion Campground. In 1992 the Sespe Creek (31.5 mile portion) was added to the National Wild and Scenic River system. The section of the creek so designated begins at the junction of Rock Creek and the Sespe and extends downstream to a mile north of Devil's Gate. Other special recreational areas include wilderness and shooting areas. Approximately 9,500 acres of the Dick Smith Wilderness is located in Ventura County. Additional Wilderness Areas within Ventura County are: Matilija - 29,600 acres, Chumash - 32,000 acres and Sespe - 212,000 acres. Major areas in the North Half are closed to shooting. The largest area includes the Sespe Condor Sanctuary.

Santa Monica Mountains National Recreation Area: In November 1978, Congress established the Santa Monica Mountains National Recreation Area (SMMNRA). In passing this legislation, Congress recognized both the significant natural and scenic qualities of the Santa Monica Mountains and their potential to serve the recreational needs of the people of this region. The National Park Service has been given the responsibility for planning, land acquisition, and management of this new national recreation area. The California Department of Parks and Recreation,the Santa Monica Mountains Conservancy, the Mountains and Recreation and Conservation Authority and other public agencies also manage recreational open space within the SMMNRA.

SMMNRA encompasses approximately 150,000 acres in the Santa Monica Mountain range in Southern California (Los Angeles and Ventura Counties). This range extends east-west for 47 miles from Griffith Park to Point Mugu

State Park and averages seven miles across. The area is bounded by the Pacific Ocean on the south, the San Fernando Valley and Thousand Oaks on the north, the Ventura/Oxnard urban area on the west, and the Los Angeles urban complex on the east. The recreation area includes a mixture of private and public lands.

The federal lands within the Santa Monica Mountains National Recreation Area located within Ventura County include:

- Cheeseboro Canyon, a 2,000+ acre area located north of the 101 Freeway, which stretches across the Los Angeles County Line. Between 1,700-1,800 acres are located in Ventura County.
- Rancho Sierra Vista/Satwiwa is located south of Potrero Road and north of Point Mugu State Park.
- Malibu Springs, located north of the Leo Carillo State Beach on the Ventura County side. (A portion of Leo Carillo State Beach is located in Ventura County.)
- Circle X Ranch, a 2,000 plus acre area, stretching from the Ventura County Line, northwest into the Boney Mountain State Wilderness Area.

Channel Islands National Park: The visitor center is located at 1901 Spinnaker Drive, Ventura and contains photo displays, lookout tower, exhibits, Chumash Indian artifacts, simulated Caliche ghost forest, indoor tidepool and a native plants display. The visitor can purchase publications, maps and nautical charts at the bookstore and view a 25 minute film, which introduces the National Park.

Five of the eight Channel Islands and surrounding six miles of ocean off of the southern California coast, comprise the Channel Islands National Park and National Marine Sanctuary. Anacapa Island is the only Channel Island considered a part of Ventura County.

Anacapa Island: The smallest, closest, and most visited of the Channel Islands, and part of the National Park System, is located 11 miles southwest of Oxnard and 14 miles southwest of Ventura. Anacapa is composed of three small islets inaccessible from each other except by boat. The "island" is nearly five miles long and about one square mile in area. The Anacapa Lighthouse is listed on the National Register of Historical Structures.

Perpendicular cliffs along the shore rise to 250 feet. Anacapa is particularly noted for spring wildflower displays, tidepools, and seabird rookeries. Perhaps the best known feature is the freestanding arch at the island's eastern end. In relationship to the size of the island, its vegetation is the most pristine of all the Channel Islands.

Most of West Anacapa Island is closed to the public to protect the largest breeding colony of the endangered California Brown Pelicans. On West Anacapa a short trail leads from Frenchy's Cove to tide pools on the southside of the island; the rest of the island is a research natural area and is closed to visitor use.

Middle Anacapa has no structured landing area and no facilities except for shoreline areas accessible to boaters. It will continue to be closed to general visitation, primarily to preserve the rare plant communities. Middle Anacapa has the largest nesting colony of Western Gulls and the most intact native Bunch Grass community of all the Channel Islands.

Most visitors go to East Anacapa Island, where there is a small visitor center where the Park Service shows a video program during the summer. Picnicking and overnight camping is allowed only on East Anacapa. The U.S. Coast Guard operates a lighthouse and fog horn on East Anacapa Island. The APCD operates an air and weather monitoring station and the County operates a radio communication system used by the Fire Protection District and Sheriff's Department. A small visitor center, primitive campground, pit toilets, and picnic table comprise the visitor facilities.

4.10.4 CONCLUSIONS

The following points summarize the main issues discussed above:

- Demand for recreation facilities exists and will increase with population.

- Cooperation between agencies can enhance recreational use of existing facilities.
- Development may obstruct access to trails and public lands.

In addition, CEQA requires review of development projects for impact to recreation facilities and opportunities. In order to address the above issues the County should pursue the following through General Plan Goals, Policies and Programs:

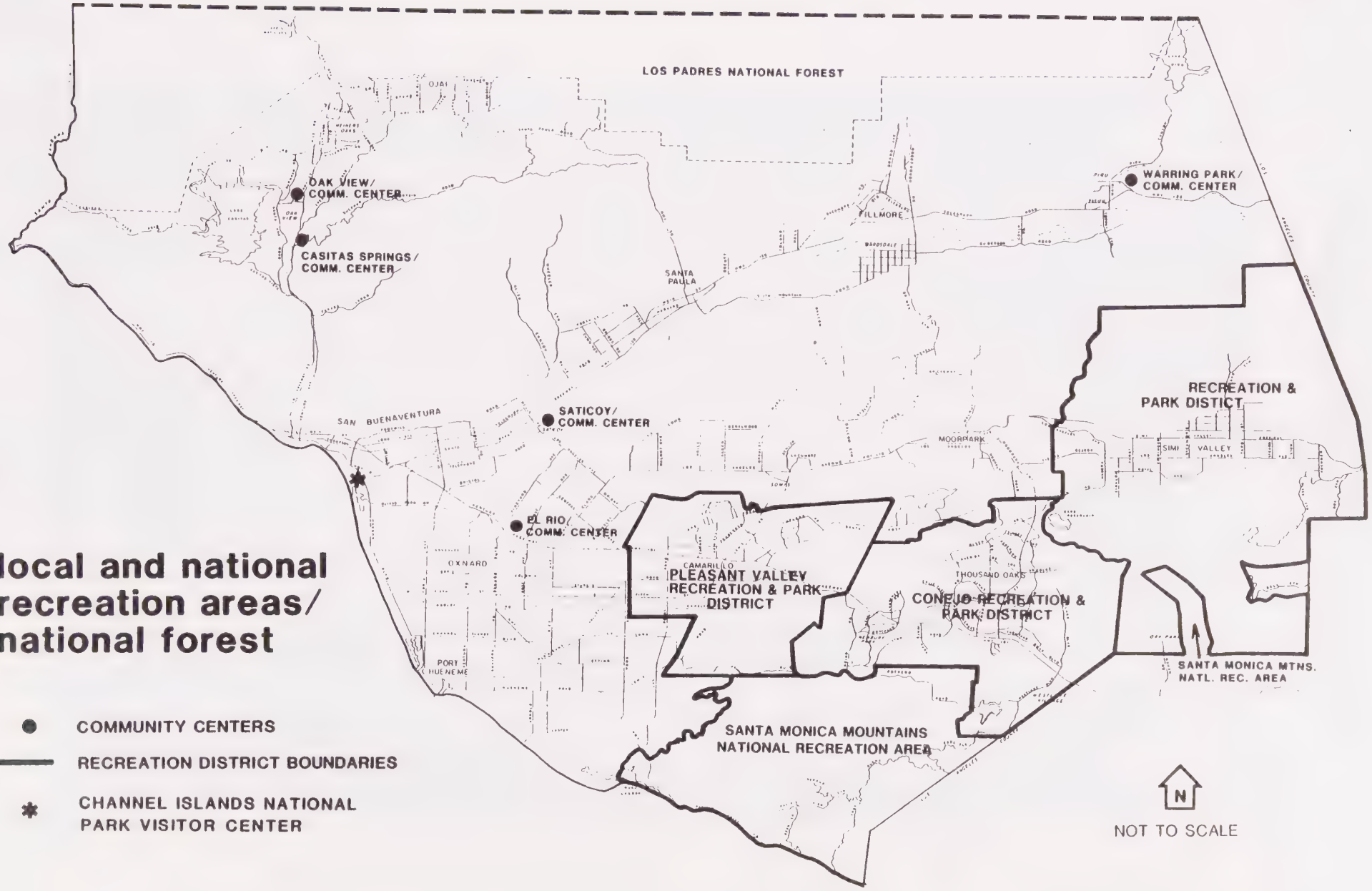
- The County should plan for the provision of recreation facilities.
- Alternative funding sources should be explored as revenues for park development are limited.
- Implementation of the County Parkland Dedication Ordinance should be continued.

REFERENCES

- Rancho Simi Recreation and Park District, 1986 General Plan
- U.S. Department of Interior/National Park Service, Channel Islands National Park General Management Plan, Vol. 1, November 1984
- U.S. Department of Interior/National Park Service, Santa Monica Mountains Land Protection Plan, 1987
- Ventura County Planning Division and Property Administration Agency, Draft Recreation Element, 1978
- Ventura County Planning Division, Ventura County General Plan Recreation Element, 1968
- Ventura County Property Administration Agency, Draft Regional Recreation Areas Plan, 1984

INDIVIDUALS CONSULTED

- Nancy Ehorn, Santa Monica Mountains National Park Recreation Area
- Nicholas Whelan, Channel Islands National Park Ranger



local and national recreation areas/ national forest

- ● COMMUNITY CENTERS
- ——— RECREATION DISTRICT BOUNDARIES
- ✱ CHANNEL ISLANDS NATIONAL PARK VISITOR CENTER

SOURCE: VENTURA COUNTY PLANNING DIVISION

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.10.1

R.7/12/94

Figure 4.10.2
Regional Recreational Facilities

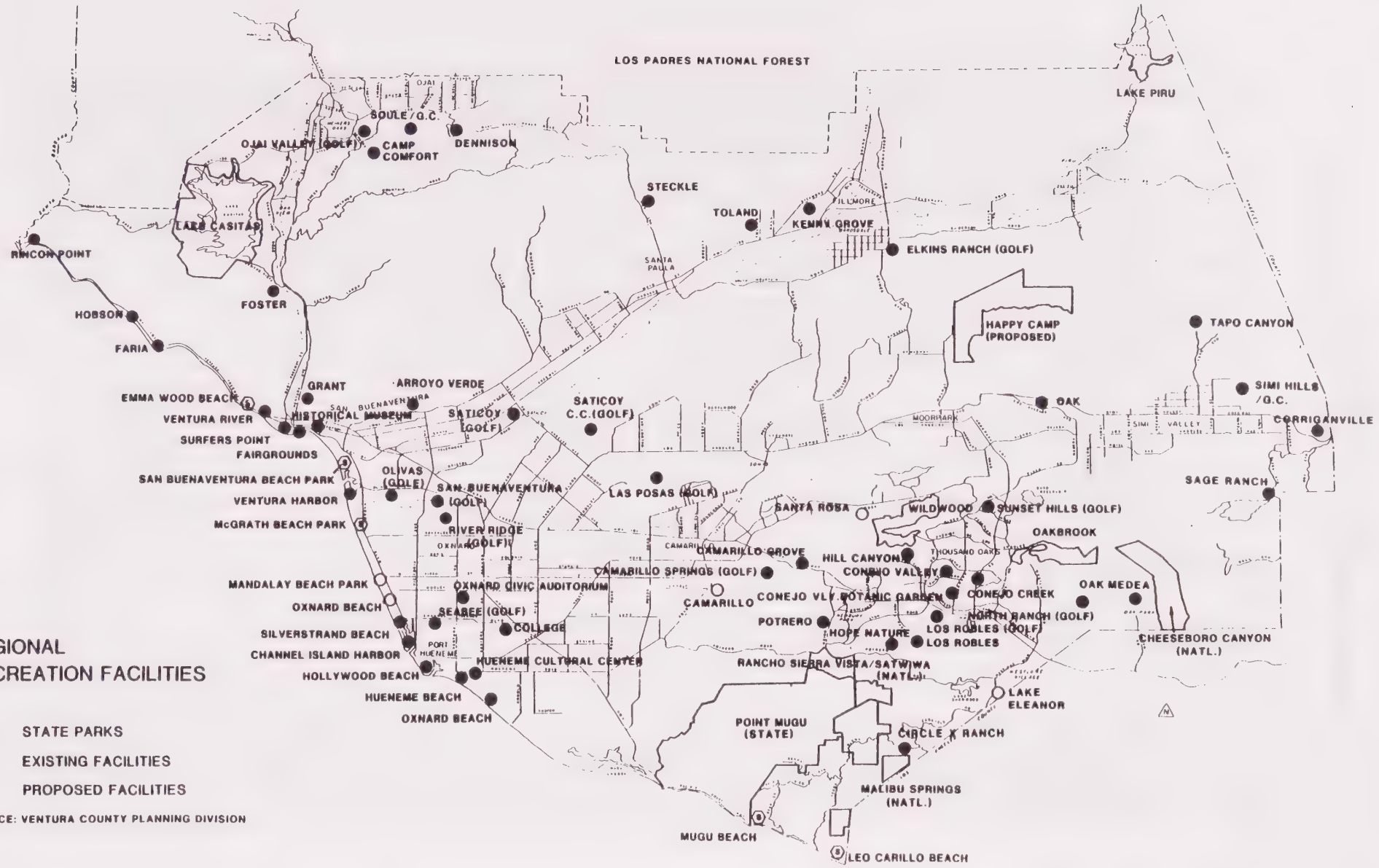
Name	Agency	Amphitheatres (Bowl)	Auditorium	Botanical Garden	Day Use Beach	Equestrian Center	Fairground	Golf Course	Historical Site	Marina	Shooting Range	Museum, Arts/Conferences	Model Planes/Ultra Lights	Nature Center	Organized Group Camping	Picnic Grounds	Picnic Grounds/Group	RV Camp	Sports Center	Tent Camping	Trail	Vista Point	Water Sports
Arroyo Simi Eq. Ctr.	K&O					✓									✗	✗					✓		
Buenaventura (GC)	F							✓									✓						
Camarillo (Hospital Site)	B	✗				✗							✗				✗				✗		✗
Camarillo Grove	B															✓	✓						
Camarillo Springs (GC)	P							✓															
Camp Comfort	B															✓	✓	✓		✓			
Carrillo	A													✓	✓	✓		✓		✓	✓		
Channel Islands Harbor	B															✓							
C I Natl Pk/Marine Sanct.	S		✓										✓	✓	✓				✓	✓	✓	✓	
Chesebro Canyon	S															✓					✓		
Circle X Ranch	S														✓	✓				✓	✓		
College	B	✓															✓	✓					
Conejo Valley Botanic Garden	J			✓																		✓	
Conejo Creek	J&O					✗										✓	✓		✓		✓		
Conejo Corriedor	S&J																				✓		
Conejo Valley	J															✓	✓						
Corriganville	K								✓						✓	✓					✓		
Dennison	B															✓		✓			✗	✓	
Elkins (GC)	P							✓															
Emma Wood	B&A				✓										✓			✓		✓			
Faria Camp	B														✓			✓		✓			
Foster	B	✓				✗			✗							✓	✓	✓		✓	✗		
Happy Camp	B	✗				✗		✗				✗			✗	✗	✗	✗	✗		✗		
Hobson Camp	B														✓			✓		✓			
Hollywood	B				✓																		
Hueneme	H				✓											✓	✓						
Hueneme Cultural Center	H		✓																				
Hungry Valley OSV	A																	✓			✓		✗
Kenny Grove	B	✓														✓	✓	✓			✗		
Lake Casitas	L	✓								✓			✓		✓	✓	✓	✓		✓	✓	✓	✓
Lake Piru	M									✓					✓	✓	✓				✓		✓
Las Posas (CC)	P							✓															
Los Robles (GC)	T							✓													✓		
Mandalay	B&A				✓							✗		✗	✗						✗		
Matilija Hot Springs	B														✓								
McGrath State Beach	A				✓									✓				✓		✓	✓		
Montgomery Ranch	K															✗					✗		
North Ranch (GC)	P							✓															
Oak	B												✓		✓	✓	✓				✗		✗
Ojai Valley (CC)	P							✓															
Ojai Valley Trail	B																				✓		
Olivas	F								✓							✓							
Olivas Park (Municipal GC)	F							✓															
Ormond Beach	G				✗									✗		✗					✗		
Oxnard Civic Auditorium	G		✓																				
Oxnard State Beach	G&A				✓									✗		✗					✗		
Point Mugu	A				✓											✓		✓		✓	✓		
Ranch Sierra Vista/Satwiwa	S&A								✗			✗		✓		✓				✗	✓	✗	

Figure 4.10.2 (continued)
Regional Recreational Facilities (continued)

Name	Agency	Amphitheatres (Bowl)	Auditorium	Botanical Garden	Day Use Beach	Equestrian Center	Fairground	Golf Course	Historical Site	Marina	Shooting Range	Museum, Arts/Conferences	Model Planes/Ultra Lights	Nature Center	Organized Group Camping	Picnic Grounds	Picnic Grounds/Group	RV Camp	Sports Center	Tent Camping	Trail	Vista Point	Water Sports
Rincon Parkway	B				✓													✓					
Rincon Point	A				✓																	x	x
River Ridge	G							✓													x		
Sage Ranch	K																x						
San Buenaventura Beach	A				✓											✓	x						
Saticoy (CC)	P																						
Saticoy (GC)	B							✓															
Seabee (GC)	O							✓															
Silverstrand	B				✓																		
Simi Hills (GC)	K							✓															
Simi-Lake Piru Corridor	K																				x		
Soule	B							✓								✓	✓						
Steckel	B													✓	✓	✓	✓				✓		✓
Sunset Hills (CC)	P							x															
Surfers Point	F				✓																		
Tapo Canyon	B					✓										✓							
Toland	B					x									x	x							
Ventura Harbor	V				✓					✓						✓							✓
Ventura County Fairground	O						✓																
Ventura County Historical	B												✓										
Ventura River Group	A				✓										✓								
PRESERVES/REGIONAL OPEN SPACE																							
Chumash	K			x					x					x		x						x	
Hill Canyon	J & T							x													✓	✓	
Hope Nature	J																				✓	✓	
Joel McCrea	J																				✓	x	
Lake Eleanor	W																				x	x	
Los Padres Natl Forest	N														✓	✓		✓		✓	✓	✓	
Los Robles	T								x												✓	✓	
North, South Ranch	W																				✓	✓	
Oakbrook	B																				✓		
Oak-Medea Creek	K																				✓	✓	
Oak Park Pub Open Space	K																				✓	✓	
Portrero	J																				✓	✓	
Santa Clara Estuary	A&G																				✓		
Tapo Canyon	A															✓					✓		
Wildwood	J															✓	✓				✓	✓	

Key

A = State of California
B = County of Ventura
C = City of Ojai
D = City of Santa Paula
E = City of Fillmore
F = City of San Buenaventura
G = City of Oxnard
H = City of Port Hueneme
I = Pleasant Valley Rec & Pks District
J = Conejo Rec & Pks District
K = Rancho Simi Rec & Pks District
L = Casitas Municipal Water District
M = United Water Conservation District
N = Los Padres National Forest
O = Other Public
P = Private
S = National Park Service
T = City of Thousand Oaks
V = Ventura Port District
W = Conejo Open Space Conservation Agency
✓ Existing Facilities
x Proposed Facilities
(GC) Golf Course
(CC) County Club



REGIONAL RECREATION FACILITIES

- ⊛ STATE PARKS
- ● EXISTING FACILITIES
- ○ PROPOSED FACILITIES

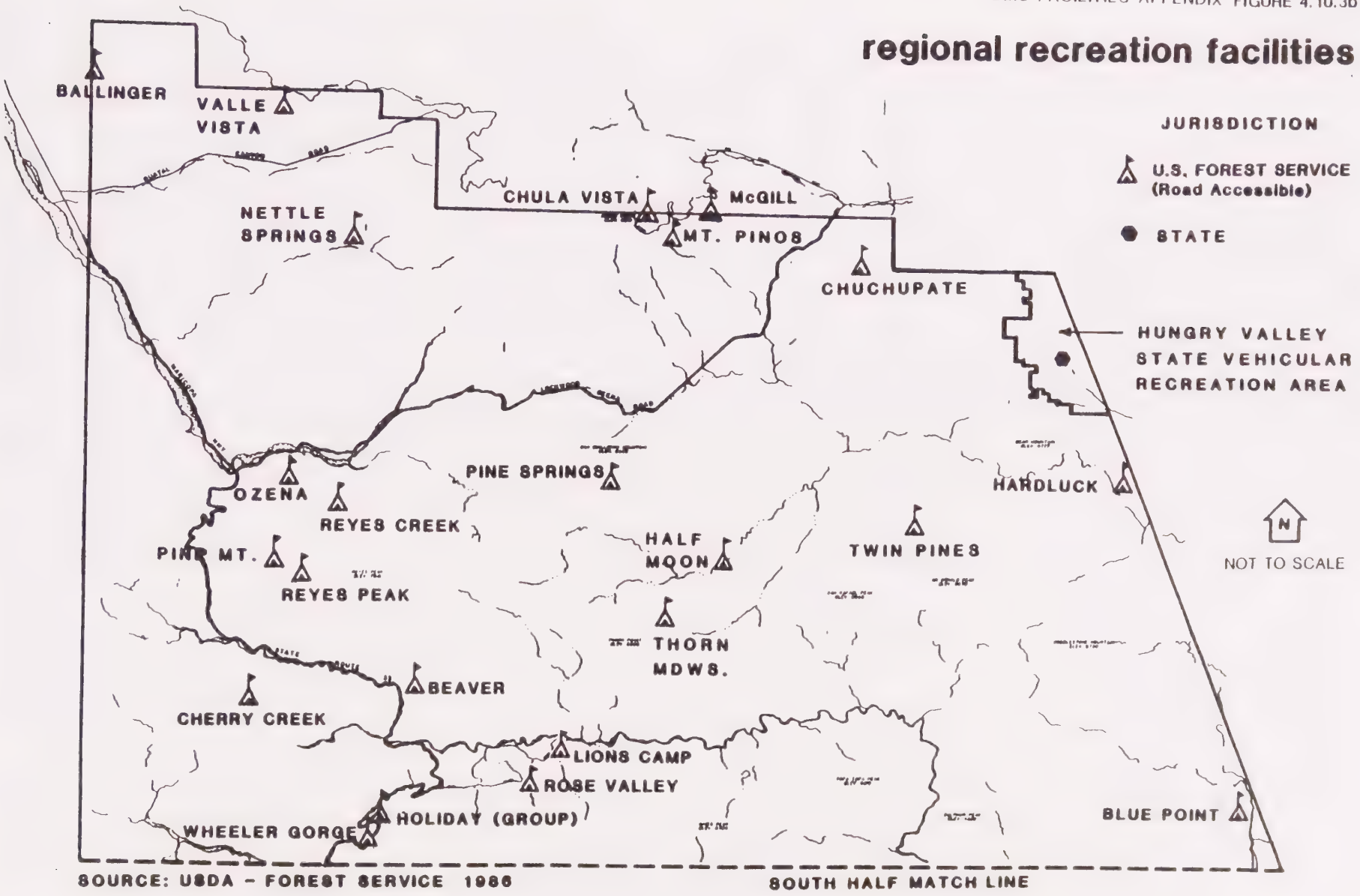
SOURCE: VENTURA COUNTY PLANNING DIVISION

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.10.3a

R.7/12/94

regional recreation facilities



SOURCE: USDA - FOREST SERVICE 1986

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4.11 OTHER PUBLIC BUILDINGS AND GROUNDS

This section discusses other public buildings and grounds including those Federal, State or County buildings, facilities and grounds that are not described in earlier portions of this Public Facilities and Services Appendix.

4.11.1 FEDERAL INSTALLATIONS, FACILITIES AND LANDS

Federal installations, facilities and lands vary from defense installations (Point Mugu Pacific Missile Test Center/Naval Air Station and Port Hueneme's U.S. Naval Construction Battalion Center) to recreation and conservation oriented facilities and lands including the Los Padres National Forest and San Nicolas Island. These are described below. The Santa Monica Mountains National Recreation Area, Anacapa Island and the Channel Islands National Park Visitor Center are discussed in Section 4.10 on Parks and Recreation.

4.11.1.1 Naval Air Warfare Center Weapons Division and Naval Air Weapons Station

The 4,500 acre Point Mugu facility is located at the western end of the agricultural lands of the Oxnard Plain, six miles southeast of Oxnard. The Ventura County and Point Mugu Game Preserves (private clubs not associated with the Navy) are located to the northwest of the base with the Camarillo State Hospital four miles northeast. The base is flanked by the Santa Monica Mountains on the east and the Pacific Ocean to the south.

Naval Air Warfare Weapons (NAWCWPNS) Division Headquarters develops and tests missile systems for the Fleet. In its traditional role of test and evaluation, NAWCWPNS is the Navy's primary facility for air launched weapons. However, other mission areas have expanded and now provide new challenges. These areas include Fleet operations support and training, engineering cognizance and in-service engineering, and increasing support for surface launched weapons. In addition, Pt. Mugu is the home to many other commands that perform a variety of functions.

The main base complex houses extensive test laboratory and support facilities, and has two runways capable of handling all modern aircraft types. The larger tenants of Point Mugu include: Air Test & Evaluation Squadron Four (VX-4), Navy Astronautics Group, Tactical Electronic Warfare Squadron, Three Four (VAQ-34), Antarctic Development Squadron Six (VX-6), Marine Aviation Detachment, and the Point Mugu Naval Reserve Forces consisting of Naval Air Reserve (NAVAIRES), Patrol Squadron SIXTY-FIVE (VP-65), Attack Squadron (VA-305), Helicopter Attack (Light) FIVE (HAL-5). There are many more smaller reinforcing units and squadrons representing almost all aspects of Naval Aviation. For further information on the Point Mugu Naval Air Station, refer to Section 4.2.4.2.

4.11.1.2 Naval Construction Battalion Center Port Hueneme

Another Federal defense installation in Ventura County is the U.S. Naval Construction Battalion Center home of the Pacific Seabees. The Center supports a staff of about 10,000 persons on over 1,600 acres of land located within the City of Port Hueneme. The Center is a training site, mobilization center and home port for the 31st Naval Construction Regiment, with its four battalions of the Navy Seabees (NMCB-3, -4, -5 and 40), two Reserve Battalions (NMCB-14 and -17), and an Underwater Construction Team (UCT-2). The Center's Supply Department maintains an inventory of equipment and material to support mobilizations or relief for national disasters, as well as maintain the everyday operation of the Center and its tenants.

Major tenants of the Seabee Center include the Naval Construction Training Center, Naval Civil Engineer Corps Officers School, Naval Energy and Environmental Support Activity, and Naval Support Force Antarctica.

The Naval Civil Engineering Laboratory (NCEL) is also located in the City of Port Hueneme. NCEL is the Navy's principal RDT&E center for shore facilities, fixed surface and subsurface ocean facilities, and for the

Navy and Marine Corps construction forces. It occupies 32 acres and maintains a staff of over 400 military and civilian personnel.

The largest tenant command on the Naval Construction Battalion Center is the Port Hueneme division Naval Surface Warfare Center. The command is one of five divisions in the Naval Surface Warfare Center. The division's basic mission has expanded to include test and evaluation, engineering, and integrated logistics support for surface combat systems, weapon systems and subsystems, unique equipments and related expendable ordinance of the surface fleet.

4.11.1.3 Los Padres National Forest

The Los Padres National Forest covers 555,618 acres or 868.15 square miles of the 1,884 square mile area of Ventura County (approximately 46% of the land area of the County).

Facilities within Los Padres National Forest include roads, trails, campgrounds, dams and buildings. Travel into and around the Forest is provided by a network of highways. For the portion of the Forest in Ventura County, access is provided by U.S. 101, California State Highways 33, 126, 150 and the County's Lockwood Valley Road. The Interstate 5 Highway located in Kern and Los Angeles Counties provides access just east of the Forest. Trails serve foot, horse, mountain, bicycle, or motorcycle traffic, and are managed for user safety, resource protection, and to meet recreation objectives. The Matilija Reservoir (no longer in use) and the upper reaches of Lake Piru lie within the Forest. Santa Felicia Dam (Lake Piru) and Lake Casitas are all located downstream from the Forest boundary.

The major facilities include the Mt. Pinos District Ranger Station (with helipad) in Chuchupate (west of Fraizer Park in the Cuddy Valley area), plus Forest Service facilities at Oat Flat (north of Fillmore near the Sespe Oilfields), Wheeler Gorge (Highway 33 north of Ojai near Wheeler Springs), Ozena (Highway 33 near Junction of Lockwood Valley Road), Temescal (northeast of Piru adjacent to Lake Piru), and the Casitas Fire Station (with helipad) on the west side of Lake Casitas. The Ojai District Ranger Station (in the City of Ojai) is located south of the Los Padres National Forest.

4.11.1.4 San Nicolas Island

The 14,000 acre (21.9 square miles) island is located approximately 60 miles off the coast of Point Mugu. San Nicolas Island is part of the Navy's Pacific Missile Test Center Sea Test Center. Approximately 350 employees, including military and civilian, staff the outlying landing field and the Naval Facility at San Nicolas Island.

San Nicolas Island is the site of about $30 million worth of communication and missile-tracking instrumentation operated by the Pacific Missile Test Center (PMTC) Range Directorate. San Nicolas' 10,000 foot runway with ground-controlled approach facilities, accommodates supersonic target aircraft and planes from the mainland during operations. The island offers an unobstructed area over which the Navy can test its new weapons system. Most PMTC activity is conducted over a rectangular area of ocean 200 miles long and 80 miles wide with the majority of operations conducted between San Nicolas Island and Point Mugu.

San Nicolas Island is one of California's key wildlife and environmental preservation areas. The natural resources of San Nicolas Island are managed by a joint agreement among the Department of the Navy, Department of the Interior, and California's Department of Fish and Game. Unique animals on San Nicolas Island include a small species of fox, the *white-footed deer mouse*, the *island night lizard* and the *rock wren* among others.

The *western gull* is another protected species that inhabits the island. They are located in the area designated as the Western Gull Rookery. San Nicolas also provides a breeding area for sea lions and sea elephants and is one of the few places in the world where both species occur naturally.

Fish in the waters are a mixture of northern and southern species, including the *yellow tail* and *rock bass*.

4.11.2 STATE FACILITIES AND LANDS

State public facilities and lands include the Camarillo State Hospital and California State Youth Authority (Ventura School). The Hungry Valley State Vehicular Recreation Area and the various State parks and beaches are discussed in the Parks and Recreation Section 4.10.

4.11.2.1 Camarillo State Hospital

Camarillo State Hospital, built in 1936, is located four miles southeast of Camarillo on a 976 acre site, with the farm portion of 435 acres leased out. The State Hospital is licensed for 1,503 beds for the mentally disabled and developmentally disabled. As of November 1988, approximately 2,100 employees provide service on a round the clock basis to the 1,200 clients housed at the facility (600 mentally disabled and 600 developmentally disabled clients). The majority of the clients are from Southern California.

4.11.2.2 California State Youth Authority (CYA) - Ventura School

Ventura School is located on a 107.4 acre site at the southwest corner of Wright Road and Beardsley Road in El Rio. Approximately 45 acres of the site is fenced. The balance is used for parking, landscaping or is leased to a private party for raising agricultural products.

The site was formerly a Youth Authority institution for female offenders only. It is presently a co-ed institution for youthful offenders, ages 17-25. In 1992, there were approximately 765 youth offenders (511 males and 254 females). Approximately 200 youths work in the institution's kitchen, laundry, grounds maintenance, warehouse, and serve as tutors in the school program, all within the fenced-in portion of the institution.

4.11.2.3 California State Youth Authority (CYA) - Ventura Public Service and Fire Center

Ventura Public Service and Fire Center is located on 2.6 acres adjacent to Ventura School on Wright Road. It opened in May 1990. It is a conservation camp operated by the Department of the Youth Authority in cooperation with the California Department of Forestry. As of November 1992, there were approximately 80 male youth offender's housed at this institution. Employees and the residents provide conservation and emergency fire suppression work throughout Ventura County.

4.11.3 OTHER VENTURA COUNTY BUILDINGS AND FACILITIES

This section describes other owned or leased Ventura County buildings and facilities not discussed in earlier portions of this Public Facilities and Services Appendix.

The following County agencies and/or departments which either own or lease County buildings and facilities will be described later in this section:

- Agricultural Department (Agricultural Commissioner)
- Animal Regulation Department
- General Services Agency (GSA)
- Information Systems Department
- Health Care Agency (HCA)
- Personnel Department
- Public Social Services Agency (PSSA)
- Public Works Agency (PWA)
- Resource Management Agency (RMA)
- Solid Waste Management Department (SWMD)

To aid the reader, the remainder of the other County buildings and facilities will be described under the County Agency or Department, with

a brief description of the services provided at that building or facility and its address.

Since the Ventura County Government Center involves all of the County buildings, facilities and services of every County Agency and Department, the facilities at the Ventura County Government Center Complex are described first. Due to the large number of County owned and leased facilities at Camarillo Airport, a description of these facilities are included.

4.11.3.1 Ventura County Government Center Complex

The County Government Center, located at 800 S. Victoria Avenue, Ventura, is an 80 acre site which contains four major facilities: the Administration Building, Hall of Justice, Criminal Justice Complex and the Service Building. Other smaller facilities include the pump house, motor pool fleet maintenance office and the Public Works Service trailer for Surveying and Roads.

The Government Center was constructed in order to more effectively provide County services to members of the public. The Center consolidates many services which previously were widely scattered throughout the City of Ventura and elsewhere.

The Administration Building includes the following offices:

- Assessor
- Auditor-Controller
- Board of Supervisors Hearing Room (Main Plaza) and Offices (Fourth Floor)
- Chief Administrative Office
- Clerk of the Board
- County Counsel
- Elections
- Information Systems Dept.
- General Services Agency
- Local Agency Formation Commission (LAFCO)
- Personnel
- Public Administrator, Guardian, Conservator
- Public Works Agency
- Recorder
- Resource Management Agency
- Treasurer
- Tax Collector

The Hall of Justice consolidates the Municipal and Superior Courts in one location with the various court support functions including Court Clerks, District Attorney, Jury Services, Public Defender, Grand Jury, Law Library, Sheriff's Civil Bureau, and Bail Review.

The Criminal Justice complex is comprised of three service areas: the Ventura County Sheriff's Department; the Main Jail; and the Corrections Services Agency. A separate crime lab building is located east of the Criminal Justice Complex.

The Service Building is located at the northeast corner of the Government Center. Purchasing, Stores, Graphics Print Shop, Custodial, Landscape, Interiors, Chair Repair, Trades, Maintenance, RMA Cross-Connection Lab, Garage, Warehouses for Interiors, and Property Administration (County Auctions) are located at this site.

4.11.3.2 County Facilities at Camarillo Airport

County Airport facilities at Oxnard Airport and Camarillo Airport are described in Section 4.2.4 on Airports. Other County maintained facilities utilizing the various buildings at the 753 acre Camarillo Airport include:

- 295 Durley Ave.: County Airport Administration Office (Building 233) plus four large hangars, six medium hangars and 242 small hangars
- 600 Aviation Drive: County Animal Control Complex on a 4.7 acre site includes:
  - Administration Building
  - Veterinarian Building

- Kennels
- Quarantine Kennels
- Barn
- Utility Building
- Corral Shelter Building and Corral Area

o 395 Willis Ave.: Ventura County Fire Protection District Headquarters. Other fire facilities include:

- Fire Prevention Annex, 460 Houck Street
- Fire Station #50, 615 Aviation Drive
- Training Smoke Room, 555 Aviation Drive
- Fire Communications Center, 355 Post Street
- Repair Shop for Fire Engines, 575 Aviation Drive

o 425 Durley Ave.: Ventura County Police and Sheriff's Training Academy
o 375 Durley Ave.: Sheriff's Hangar
o 410 Willis Ave.: Work Furlough Buildings, Corrections Services Agency

- Work Furlough Facility (Bldg. 276)
  Work Furlough Facility (Bldg. 252) (including Dining Hall and Offices)
- New Building Work Furlough to be built in future

o 101 Durley Ave.: Chief Administrative Office - storage by various County Agencies (Bldg. 127)
o 170B Durley Ave.: Airport Maintenance and Storage (Bldg. 137)
o 365 Willis Ave.: Agricultural Office (Bldg. 257)
o 275 E. Pleasant Valley Road: County Superintendent of Schools buildings include:

- Office (Bldg. 161)
- Gate House (Bldg. 157)
- Shop Building (Bldg. 155)
- Motor Shop (Bldg. 179)
- Wash Rack
- Auto Maintenance (Bldg. 163)
- Body & Fender Shop (Bldg. 160)
- Bank Teller (Bldg. 170)
- Paint Storage (Bldg. 162)
- Dental Classroom (Bldg. 164)
- Service Station (Bldg. 165)
- Food Service (Bldg. 166)
- Dental Building (Bldg. 167)
- Portable Building (Bldg. 168)
- Special Education (Bldg. 140)
- Mechanical Occupations (Bldg. 133)
- Classroom Special Education (Bldg. 135)
- Auto Body Classroom (Bldg. 141)
- Library (Bldg. 143)
- Classroom & Storage (Bldg. 147)

In addition, Oxnard College, Oxnard Union High School District, U.S. Border Patrol, U.S. Navy, Greek Orthodox Church, and Pleasant Valley Parks and Recreation all own facilities at Camarillo Airport and several private airport-related businesses lease facilities from the County.

4.11.3.3 Agricultural Commissioner (Department) Facilities

The Agricultural Commissioner is responsible for enforcing Federal, State and local laws and regulations which relate to the protection of the public health, safety and welfare. This Department prevents fraud and deception in the packaging and marketing of agricultural products; inspects crops to detect and eradicate new and damaging pests; and enforces laws in the use of pesticides.

The main Agricultural Commission Office is in the Agricultural Building at 815 E. Santa Barbara Street, Santa Paula (owned). District offices are located at:

- Oxnard District: 680 El Rio Drive, Oxnard (owned).
- Ventura-Ojai District: 1068 E. Main Street, Room 110, Ventura (leased).
- Camarillo District: Camarillo Airport - Security Building - 275 Pleasant Valley Road #206 (leased).
- Simi Valley-Moorpark District: 2003 Royal, Room 205, Simi Valley (leased).

4.11.3.4 Animal Regulation Department Facilities

The Animal Regulation Department is responsible for the care and housing of sick, injured, abandoned, unwanted and stray animals; the enforcement of animal related State and local laws; and the suppression of rabies through an active quarantine and vaccination program.

The County Animal Control Central Facility is located at the Camarillo Airport on a 4.7 acre site, located at 600 Aviation Drive, Camarillo. County-owned buildings include an Administration Building, Veterinarian Building, Kennels, Quarantine Kennels, Barn, Utility Building, and Corral Shelter Building and Corral Area. The East Valley Holding Facility is located at 670 W. Los Angeles Avenue, Simi Valley (owned).

4.11.3.5 General Services Agency (GSA) Facilities

The General Services Agency was created as a result of a merger of the Support Services Agency with the Property Administration Agency in fiscal year 1985-86. This Agency is comprised of five departments: Administrative Services, Central Services, Risk Management, Facilities and Grounds, and Recreation Services. Some of the responsibilities of this Agency include Facilities Management including Custodial Services, Building Maintenance and Repair, Security and Energy Conservation; Materials Management including Purchasing, Stores, Warehousing, Surplus Property and Graphics Services; and Agency Administration providing general guidance and direction, including the development of policies and procedures. In addition, GSA is responsible for Office Services for Furniture, Inventory Control, Word Processing and Mail Services; Fleet Services including Transportation and Heavy Equipment; and Audio-Visual Equipment; Risk Management providing Risk Analysis, Safety and Claims Programs, General Insurance, Workers' Compensation and the evaluation of all Disability Retirements; and Landscape Services.

GSA's main office is located in the Administration Building, Lower Plaza, County Government Center, 800 S. Victoria Avenue, Ventura. Many of the services provided by Facilities and Grounds are located in the Service Building at the County Government Center. Other GSA facilities include:

- GSA Maintenance and Storage in Bldg. 137 at the Camarillo Airport at 275 E. Pleasant Valley Road (owned).
- Park Patrol Headquarters, Transportation, Fleet Administration, Main Garage, Heavy Equipment Garage, County welding shop West County Parks Maintenance and a custodial shop are located at 682 El Rio Drive, Oxnard (owned).

Channel Islands Harbor Facilities:

- 3900 Pelican Way: Harbor Manager & Patrol
- 3401 Peninsula Ave.: Community Service Bldg.
- 3605 Victoria Ave.: Harbor Maintenance Bldg. & Storage
- 3121 & 3141 Victoria Ave.: Small boat marina, restrooms & yacht sales office
- 2741, 3001 & 4021 Victoria Ave.: Includes launch ramps and restrooms (All County Owned Buildings and Facilities).

In addition, GSA regulates and administers 24 regional and nine local park facilities (identified in Parks and Recreation Section 4.10).

4.11.3.6 Information Systems Department (ISD) Facilities

Communications equipment, operated by the Information Systems Department, includes radio, microwave and telephone switching equipment. They are located at the following sites:

- Anacapa Island - radio/microwave equipment
- Red Mountain - radio/microwave equipment
- South Mountain - radio/microwave equipment
- East Valley Sheriff Station - radio/microwave and switching equipment
- Rocketdyne - radio/microwave equipment
- Camarillo Airport - radio/microwave/switching equipment
- Oxnard PSSA - radio/microwave/switching equipment
- Oxnard Police Dept. - radio/microwave/switching equipment
- El Rio - radio/microwave/switching equipment
- County Government Center - radio/microwave/switching equipment
- County Medical Center - radio/microwave/switching equipment
- Telephone Road County Office Building - microwave/switching equipment
- Ventura College - microwave/switching equipment
- Oxnard College - microwave/switching equipment
- Moorpark College - microwave/switching equipment
- Poli Avenue - Microwave/switching
- Royal Avenue - Microwave/switching

In addition, switching equipment is located in Santa Paula, County Superintendent of Schools and at Poli Street. This communications equipment is utilized by the following County agencies and departments: Sheriff's Department Patrol, Sheriff's Emergency Medical, Fire Protection District, GSA/Radio Electronics, GSA/Central Service/Telephones and Businesses, RMA/Building and Safety, PSSA/Income Maintenance, PWA/Flood Control, PWA/Road Services/Administration, PWA/Engineering, HCA/Alcohol Services, HCA/Substance Abuse/Drugs, HCA/Medical Center, and ISD/Computer Operations.

4.11.3.7 Health Care Agency (HCA) Facilities

Health Care Agency Administration plans for the delivery of appropriate health services throughout the County. The Health Care Agency components are the Medical Center, Mental Health Services, Public Health Services, Alcohol Services and the Medical Examiner.

The Ventura County Medical Center is a general acute care facility with over 200 beds. The Medical Center provides Comprehensive Neonatal, Emergency and Outpatient Medical Care Programs. Its teaching program is affiliated with the UCLA School of Medicine.

In 1980 a four story (46,000 sq.ft.) Critical Care Facility Annex was added to the Ventura County Medical Center at 3291 Loma Vista Road, Ventura. The facility provides CT Scan equipment, emergency room facilities and prenatal care services.

Mental Health Services is responsible, under the Community Mental Health Services Act of the Welfare and Institutions Code, for planning and delivering an array of Mental Health Services.

The Health Department (Public Health Services) is responsible for the protection, maintenance and improvement of public health through collaborative planning and development of an effective community health service program, working with all related and/or concerned organizations and individual citizens.

Alcohol Services Administration is mandated by AB 272 if the County is to receive Federal and/or State funding for Alcohol Services. A core program which includes prevention, identification, non-residential and residential services are provided by the County, either directly or through contract. Alcohol Information Schools are also provided.

The Medical Examiner-Coroner's Office establishes the cause and manner of death in certain categories of suspicious, unusual, unnatural and unexpected deaths as enumerated in the California Government Code, Section 27491.

Drug Abuse Services are mandated under the Community Mental Health Services Act, Division V of the Welfare and Institutions Code. Services include prevention, education and treatment serving all members of the community.

The main office of the Health Care Agency is located at 350 Hillmont Avenue, Ventura (owned); West County Counseling Center Office is a leased facility located at 793 E. Main Street while the East County Counseling Center is located at 2003 Royal Avenue, Simi Valley (leased); a Drug/Alcohol Counseling Office is located at 323 E. Matilija Street, Ojai (leased); a Health Care Agency Office is also located at 3161 Loma Vista Road, Ventura (owned); and the Medical Examiner/Coroner's Office is located at 3291 Loma Vista Road, Ventura (owned).

Mental Health Services Administration Office is at 300 Hillmont Avenue, Ventura (owned). Mental Health Service facilities include:

- Mental Health Services Oxnard Office is in a new County-owned office building at 1400 Vanguard Drive, Oxnard
- Mental Health Services Simi Valley Office is located at 3150 Los Angeles Avenue, Simi Valley (owned)

All remaining Mental Health Services Facilities are leased and include:

A Mental Health Outpatient Clinic at 333 W. Harvard Blvd., Santa Paula and a Mental Health Clinic at 1459 Thousand Oaks Blvd., Thousand Oaks. HCA-Family Care Medical Clinics are at 917 W. Seventh Street, Oxnard; 722 E. Main Street, Ventura; 620 E. Main Street, Ventura (Forensic Mental Health); and the Mental Health Senior Outreach Center is at 738 & 744 E. Main Street, Ventura.

The following are all leased Mental Health Semi-Independent Living Facilities:

- 2730 Bolker Drive, Port Hueneme
- 1221 and 1230 Isleton Street, Oxnard
- 141 and 145 East Simpson, Ventura

Public Health Services Main Office is located at 3147 Loma Vista Road, Ventura (owned). Satellite Health facilities include: Health Care Agency Medical Clinic, 1320 Maricopa Highway, Suites "D" and "E", Ojai (leased); Santa Paula Public Health Center, 1320 E. Main Street, Santa Paula (leased); Simi Valley Public Health Center, 2003 Royal Avenue, Simi Valley (leased); and Family Care Center, 1150 N. Ventura Avenue, Ventura (leased).

The Ventura County Medical Center Complex is located on a 40 acre site at 3291 Loma Vista Road, Ventura. County-owned facilities include the hospital, clinic, emergency room and cat scan annex which are all located in the hospital. Other buildings include: Public Health, Mental Health, and Health Promotion Center (HCA Personnel). The remainder of the Medical Center Complex includes: Women's Health Center, Pediatric Clinic, Plant Operations, Supply Storeroom, Genetics Program, Family Care Center, Family Care Annex, Collections and Insurance and Coroner's Office. Juvenile Hall, Juvenile Court, Juvenile Work Furlough, kitchen and dining, storage, boiler and laundry, research lab, Public Health Annex building and other maintenance and Health Department trailers comprise the balance of the Medical Center Complex. Other major buildings are located in the 300 block of Hillmont Street and 3210 Foothill Road in Ventura.

4.11.3.8 Personnel Department Facilities

The Personnel Department is responsible for personnel administration, including recruitment, affirmative action, salary and benefits

administration, occupational health, employee training and development and personnel records maintenance.

The Administrative Office of the Personnel Department is located in the Administration Building, Fourth Floor at the County Government Center, 800 South Victoria Avenue, Ventura. The only other facility is a Personnel Office at 950 County Square Drive, Ventura (leased).

4.11.3.9 Public Social Services Agency (PSSA) Facilities

The Social Services Division of PSSA is responsible for the proper administration and delivery of a variety of services. Some of these include information and referral services to Aid to Families with Dependent Children (AFDC), Adult Protection Services, In-House Supportive Services, Out of Home Services to Adults, the Senior Survival Mobile, two Domestic Violence Programs and a Day Care Center. The areas covered under this program area include Welfare Administration, Aid to Families and Children, and General Welfare. Income Maintenance handles funding for administration of the financial aid programs. This unit determines eligibility for AFDC, Medi-Cal, General Relief and the Food Stamp Program. The Aid to Families with Dependent Children, Foster Care (AFDC-FC) Program provides care in Foster Homes, Institutions or certain Adoptive Homes for children who cannot receive care in their own home. The Dependent Children Unit provides financial assistance to families where one or both parents—are absent, deceased or incapacitated. The PSSA Welfare Unit administers and provides Social, Welfare and Employment Services to residents of Ventura County. The Area Agency on Aging plans, coordinates and advocates for the development of a comprehensive service-delivery system to meet the short-term and long-term needs of older persons in the County. The Care of Indigents Program provides financial assistance to needy indigent persons who do not qualify for other types of aid. This program provides temporary aid to such persons, usually until they can find employment, qualify for other aid or otherwise resolve their problems. The Social Welfare Assistance Program provides emergency aid to recipients of the Supplemental Security Income/State Supplement Program (SSI/SSP). Aid may be for replacement of household furniture and equipment destroyed through a catastrophic event or to provide housing repairs or pay for moving expenses.

The PSSA Office is located at 505 Poli Street. District Offices for Income Maintenance and Adult Services are located at:

- Oxnard District: 210 South "B" Street, Oxnard (leased)
- Santa Paula District: 1320 E. Main Street, Santa Paula (leased)
- Simi District: 2003 Royal Avenue, Simi Valley (leased)
- Thousand Oaks District: 215 N. Moorpark Road, Thousand Oaks (leased)
- Ventura District: 4651 Telephone Road #100, Ventura (owned) Children's Services are also located at the Ventura District Office

Veterans Services Office is at the County Government Office Complex at 1400 Vanguard, Oxnard (owned).

The Greater Avenues for Independence (GAIN) Program is headquartered at the Administrative Office at 505 Poli Street, Ventura (owned) with Services Offices at:

- Oxnard: 580 E. Third Street, Oxnard (leased)
- Ventura: 110 Olive Street, Suite N, Ventura (leased)
- Simi Valley: 995 Los Angeles Avenue, #123, Simi Valley (leased)

PSSA Hot Meals Program is located at:

- 275 E. Pleasant Valley Road (Bldg. 246), Camarillo (owned) with a Senior Nutrition Kitchen at 2220 Ventura Blvd., Camarillo (owned). Senior Nutrition Meal Site at Golden Age Activity Center is located at 195 Mahoney Avenue, Oak View (leased).

- Senior Nutrition Recreation Center, 550 Park Avenue, Port Hueneme (leased)
- Senior Nutrition Program, 530 W. Main Street, Santa Paula (leased)

Other PSSA Offices at 735 E. Santa Barbara Street, Santa Paula (owned) and at 4721 Market Street, Ventura (leased).

4.11.3.10 Public Works Agency (PWA) Facilities

The Public Works Agency is divided into four departments, headed by Deputy Directors and Administrative Services:

- Real Property Services Department consists of three divisions: Real Estate Services, Water and Sanitation Services, and Development and Inspection Services
- Transportation Department is organized into five sections: Planning, Road Design and Construction, Transportation, Traffic, and Road Maintenance
- Engineering Services Department is organized into six sections: County Surveyor, Mapping, Right-of-Way and Control, Project Engineers, Contracts and Materials
- Flood Control and Water Resources Department

The Administrative Office of the Public Works Agency is located at the Administration Building, Third Floor of the County Government Center at 800 South Victoria Avenue, Ventura, along with the Public Works service trailer for Surveying and Roads also located at the County Government Center. Public Works owned facilities in the Lockwood Valley Road area include a residence and office, bunkhouse and shed, pump house, wood shed and light plant. Public Works Road yard owned facilities at 1768 Maricopa Highway, Ojai, include storage, office, shed and an oil house. Public Works Maintenance yard facilities at 682 El Rio Road, Oxnard, include a joint operations building (owned). The Public Works Road Maintenance Yard facilities at the Walnut Canyon Road location 1 mile north of High Street, Moorpark, includes 2 garages, storage, office building and maintenance building (County owned).

4.11.3.11 Resource Management Agency (RMA) Facilities

The Resource Management Agency has five major divisions:

- Resource Management Agency Operations Division provides central managerial, fiscal, budget, accounting and personnel services. The Weights and Measures unit is also part of the division. The unit is responsible for ensuring equity in all commercial transactions by systematic inspection and testing of all commercially-used weighing and measuring devices in the County.
- Environmental Health Division is responsible for protecting the public by identifying and managing the factors within the environment which impact public health. They accomplish this by inspecting drinking water systems, food operations, waste disposal sites and public recreational facilities.
- Building and Safety Division protects the public against hazards associated with the construction, use and occupancy of buildings and structures. This responsibility is carried out by enforcing building codes which regulate the design and construction of buildings, electrical wiring, plumbing and mechanical systems.
- Air Pollution Control District protects public health and agriculture by identifying air pollution problems and developing a long-range, comprehensive program to achieve and maintain air quality standards.
- Planning Division protects the health, safety and welfare of the general public through the administration and enforcement of County Ordinances, Board policy and State and Federal laws regarding land development and environmental regulation.

The Administrative Office of the Resource Management Agency is located on the Third Floor of the Administration Building, County Government Center, 800 South Victoria Avenue, Ventura, with the RMA (Environmental Health)

Cross-Connection Lab located in the Service Building at the County Government Center. Building and Safety Offices are located at the County Government Center, 800 South Victoria Avenue, Ventura and 3855-F Alamo Street, Simi Valley (owned). The Weights and Measurement Calibration Station is located on the 600 Block of El Rio Road, Oxnard (owned).

The Air Pollution Control District (APCD) office is located at 669 County Square Drive, Ventura (leased). The APCD Monitoring and Technical Service Office is located at 2065 Sperry Drive, Ventura (leased). APCD Monitoring Stations are located at nine separate locations:

- Anacapa Island - East Island near the lighthouse (leased)
- El Rio - Rio Mesa High, 545 Central Avenue, Oxnard (leased)
- Ojai - 1768 Maricopa Highway (owned)
- Piru - 2815 E. Telegraph (owned)
- Simi Valley - 5400 Cochran (leased)
- Thousand Oaks - 1135 Windsor (leased)
- Ventura - 535 E. Main Street (leased)
- Ventura - 5500 Block Casitas Pass Road and State Highway 150 (leased)
- Ventura - Emma Wood State Park at Highway 101 and West Main Street (leased)

4.11.3.12 Solid Waste Management Department (SWMD)

The Solid Waste Management Department, located at 5275 Colt Street, Ventura, is responsible for the development and implementation of programs to reduce the amount of waste disposal and energy consumed in the County through the Countywide Integrated Waste Management Plan. Programs include source reduction, recycling, waste composting and public information. SWMD is also responsible for the development and implementation of the County Hazardous Waste Management Plan that includes goals, policies, programs and an implementation schedule for management of hazardous waste for action by the County and the ten cities.

Related functions of the department include negotiation and management of contractor franchise agreements with solid waste disposal operators as required by County Ordinance and coordination with cities, special districts and other public and private agencies.

4.11.4 CONCLUSIONS

4.11.4.1 Federal and State Facilities

While the County does not have legal jurisdiction over the placement of Federal and State facilities, the General Plan Goals, Policies, and Programs should address issues relating to continuing a cooperative working relationship exchange of information with Federal and State facility planners. Additionally, the General Plan Goals, Policies, and Programs should encourage the Federal and State government to comply with the County's General Plan and other adopted standards, regulations and land use policies.

4.11.4.2 Other County Facilities

In providing the services for which it is responsible, the County often must construct new public facilities. These projects must be planned and implemented in accordance with the overall Goals, Policies and Programs of the General Plan. In this way, the County's own review of new projects and facilities will set a positive example for other agencies having major capital improvement programs.

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ventura county general plan

resources

appendix

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX

1988

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VENTURA COUNTY GENERAL PLAN

RESOURCES APPENDIX

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1. RESOURCES APPENDIX

1.1 INTRODUCTION

The Resources Appendix is intended to complement and support the Resources Chapter of the General Plan **Goals**, **Policies** and **Programs** by providing background information regarding resources and resource management. Where appropriate, a section has been written to inventory, (i.e., quantify or qualify) the resources of Ventura County, to discuss the relative value of the resource, to discuss applicable State and Federal laws, to discuss issues regarding the depletion, degradation or loss of the resource, and to present conclusions regarding **conservation, preservation** or development and utilization of the resource.

This appendix acknowledges the various Federal and State plans and programs which already address particular resource issues. This Appendix is intended to be an overview sufficient to illustrate the considerations which led to formulation of the Resources Chapter of the General Plan Goals, Policies and Programs.

This appendix is an integral part of the General Plan. As such, resource issues are interrelated with land use, hazards, and public facilities and services.

The words shown in **boldface** within this Resources Appendix are defined in the Goals, Policies and Programs document's Glossary.

1.2 AIR QUALITY

The following sections discuss the extent and characteristics of the County's air pollution problem, the provisions of Federal law pertaining to air quality, and the process of local air quality management. The majority of this section has been extracted from the 1987 Air Quality Management Plan.

1.2.1 PROBLEM

Air pollution is hazardous to health, diminishes the production and quality of many agricultural crops, reduces visibility, degrades or soils materials, and damages native vegetation. To combat the problem, the Federal Clean Air Act was approved by Congress in 1970. As a result of the Clean Air Act, the Federal Government through the Environmental Protection Agency (EPA) has established air quality standards. These National Ambient Air Quality Standards (NAAQS) define the levels of air quality that are necessary, with an adequate margin of safety, to protect the public health.

The Federal Clean Air Act Amendments of 1977 required that primary (health based) standards be attained by December 31, 1982. However, the 1977 Amendments provided for an extension under certain conditions until December 31, 1987 for attainment of the ozone (and carbon monoxide) standards. Ventura County was granted an extension, but like many other areas of the country, failed to attain the standards by the statutory deadline.

In response to the nonattainment problem, the Federal Clean Air Act was amended again in November 1990. For the pollutant ozone, the new law establishes nonattainment area classifications ranked according to the severity of the area's air pollution problem. These classifications are marginal, moderate, serious, severe and extreme. The Environmental Protection Agency assigns each nonattainment area one of these categories, thus triggering varying requirements the area must comply with in order to meet the ozone standard. The more severe an area's problem is, the more time the area is allowed to meet the standard.

State standards apply to the same pollutants as the Federal standards except for the addition of air quality standards for hydrogen sulfide, sulfates, vinyl chloride, and visibility reducing particulates. The state standards for ozone and particulate matter are more stringent than the federal standards.

The California Clean Air Act of 1988 established new requirements to bring areas into compliance with state air quality standards. Much like the new Federal Clean Air Act, California law classifies areas according to the severity of the air pollution problem and sets forth different requirements depending on the area's classification.

Ozone, the primary constituent of smog, is formed in the atmosphere through complex chemical reactions involving reactive organic compounds (ROC) and nitrogen oxides (NO_x) with ultraviolet energy from the sun. In Ventura County, the primary sources of ROC are motor vehicles, organic solvents, the petroleum industry, and pesticides. The primary sources of NO_x are motor vehicles, the petroleum industry and power plants.

Ozone, in relatively low concentrations, can cause such effects as damage to vegetation and cracking of rubber. At higher concentrations, ozone can impact public health by directly affecting the lungs, causing respiratory irritation and changes in lung function. Ozone is a strong irritant that attacks the respiratory system, leading to lung tissue damage. Asthma, bronchitis, and other respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to ozone. When ozone levels are high, people with respiratory and cardiac difficulties, the elderly, and children are advised to remain indoors. Outdoor exercise by healthy adults also is discouraged since strenuous activity may cause shortness of breath and chest pains. Healthy people exposed to high ozone concentrations may become nauseated or dizzy, may develop headaches or coughs, or may experience a burning sensation in the chest. Other constituents of photochemical smog also may pose a threat to health; however, their effects are not fully understood.

Ozone interferes with photosynthesis, thereby damaging ornamental plants, natural vegetation, and agricultural crops. With many crops, ozone stunts growth, reduces yields or causes aesthetic damage which lowers the market value. According to a recent report prepared by the California Air Resources Board (ARB), ozone causes more than $300 million worth of annual crop losses in California. Culminating years of study, the ARB has concluded that ozone pollution cost farmers and consumers $332.9 million in 1984 in reduced harvests for 15 commercial crops.

Atmospheric particulate matter is comprised of finely divided solids or liquids such as dust, soot, aerosols, fumes and mists. The particles of primary concern are those less than ten microns in diameter. These are the particles which have the greatest likelihood of being inhaled deep into the lungs. Human generated particulate matter results from a variety of activities including agricultural operations, industrial processes, combustion of fossil fuels, construction and demolition operations, and entrainment of road dust into the atmosphere. Natural sources of particulate matter include wind blown dust, wildfires, and salt from sea spray.

An area is in **nonattainment** of the national ozone standard if a maximum hourly concentration exceeds the health-based standard of 0.12 parts per million (12 parts per hundred million) on more than three days in the past three years. A concentration greater than 0.12 parts per million is called an "adverse level." All stations monitoring ozone in Ventura County have experienced adverse levels annually.

Ventura County exceeds the National Ambient Air Quality Standards for ozone. Areas of the County south of the southern border of the Los Padres National Forest have been designated nonattainment for ozone. In general, the ozone problem is worst in inland valleys, decreasing as one moves toward the coast (See Figures 1.2.3 and 1.2.4).

Although smog producing chemicals and other pollutants are found throughout the year, special meteorological conditions exist in Ventura County during the smog season, typically May-October. Daytime westerly surface winds (winds from the west) are common during smog season. While these sea breezes move inland carrying and picking up new emissions,

photochemical reactions are occurring in the atmosphere. Normally, the warm air masses cool and disperse as they rise. But, under certain atmospheric conditions common to the smog season, a layer of warm air fails to cool and disperse at the usual rate. Air rising from below which cannot penetrate this layer becomes trapped and stagnates. This condition is called an "inversion."

Air pollutants are trapped under the inversion, and they accumulate unless the inversion breaks up, or winds are strong enough to disperse the pollutants horizontally. Inversions commonly occur at 800 to 1,000 feet above sea level during smog season. On occasion, however, afternoon inversions may be as low as 200 feet.

The County's air quality is also affected by transport of pollutants from outside the County. Sources of this pollution have been identified as Los Angeles County, Santa Barbara County, and Outer Continental Shelf (OCS) oil production and exploration activity.

In most cases, the sources listed above add to existing air quality problems in the County. The contribution of Los Angeles emissions in most case studies remains unquantifiable. Los Angeles transport is generally observed during southeasterly or easterly flow aloft; however, surface west winds also transport "local emissions" from Ventura County coastal areas during this meteorological regime. This is evidenced by the high frequency of westerly surface winds during hours when ozone levels exceed standards in Ventura County.

1.2.2 AIR QUALITY MANAGEMENT

The EPA is the primary agency for the administration of the Clean Air Act passed by Congress in 1970. The California Air Resources Board is the lead agency for the State and retains control over mobile sources. According to the Clean Air Act, it is the responsibility of the State and local governmental agencies to provide a plan which will assure that Federal standards are achieved and maintained. If any state fails to provide an implementation plan which assures that the ambient air quality standard will be met, the EPA will then be responsible for providing such a plan in accordance with the Clean Air Act.

The Air Pollution Control Program for the County is directed by the Ventura County **Air Pollution Control District (APCD)** in coordination with, and as part of, the Federal, State and regional air pollution control efforts. The APCD is organizationally within the Resource Management Agency and is governed by the Air Pollution Control Board (Board of Supervisors). At the regional level, Ventura County is part of the South Central Coast Air Basin.

In accordance with the Clean Air Act requirements, the APCD adopted the Air Quality Management Plan (AQMP) in 1979 and subsequently updated the AQMP in 1982. The 1987 AQMP was adopted by the Air Pollution Control Board on July 26, 1988. In addition to analyzing Ventura County's air pollution problems, this plan contains control strategies for reducing air pollutant emissions. These strategies have been successful in substantially reducing emissions in Ventura County.

Long range control strategies focus on improvement of current stationary source controls and transportation control measures. Stationary source controls are typically implemented through the APCD permit process, as well as through processing of discretionary entitlements. Transportation control measures (TCM) are most typically implemented through processing of discretionary entitlements and include the following:

- Ridesharing Programs
- Traffic Flow Improvements
- Parking Management Strategies
- Public Transit
- Non-motorized Transportation Strategies

- Telecommunications
- Methanol Fuel Use
- Land Use Strategies

Implementation of multiple TCMs can often best be coordinated and integrated by development of a Transportation Demand Management Program for **development** projects.

The APCD's Trip Reduction Rule 210, requires large employers in the County to develop and implement trip reduction plans. These plans are designed to reduce the number of solo drivers commuting to work.

The Land Use Strategies TCM includes both site design elements and regional land use planning elements. The regional planning measures include a jobs/ housing balance strategy to reduce commuting and Population Forecast Consistency Programs. The population forecasts of the Countywide Planning Program were used as the basis for forecasting air emissions in the AQMP. These same population forecasts are used in formulating the Land Use Chapter (of the General Plan) and appear in the Land Use Technical Appendix. As a TCM, the policies prohibiting development which is inconsistent with these population forecasts will reduce air quality degradation and maintain the effectiveness of the AQMP.

Another avenue of implementation of emission control measures is through the environmental review process (a standard step in the processing of discretionary entitlements). The APCD has adopted the Guidelines for Preparation of Air Quality Analyses to enhance the effectiveness of the environmental review process. Adherence to the Guidelines will assist emission control efforts.

Although the short term prospects for improved air quality are good, the long term outlook remains questionable. Many of the gains made in recent years may be lost if population growth and development continue to accelerate in Ventura County. The 1991 AQMP predicts that ozone precursor levels will decline through 2000, then begin to turn upwards as increased urban development overtakes emission control measures. Attainment of the NAAQS for ozone is not anticipated to occur in the foreseeable future.

1.2.3 CONCLUSIONS

Ventura County air quality does not meet State and Federal standards for ozone. The adopted strategies and methods for enhancing the County's air quality are listed in the AQMP. These measures should be implemented through conditions of approval of discretionary entitlements and the goals, policies and programs of the General Plan. New means of air quality enhancement should be researched and implemented as is feasible.

Figure 1.2.1

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [2,5]	Secondary [2,6]	Method [4,7]
Ozone	1 Hour	0.09 ppm (180 ug/m3)	Ultraviolet Photometry	0.12 ppm (235 ug/m3)	Same as Primary Std.	Ethylene Chemiluminescence
Carbon Monoxide	8 Hour	9.0 ppm (10 mg/m3)	Non-dispersive Infrared Spectroscopy (NDIR)	9.0 ppm (10 mg/m3)	Same as Primary Stds.	Non-dispersive Infrared Spectroscopy (NDIR)
	1 Hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
Nitrogen Dioxide	Annual Average	-	Gas Phase Chemilumi-nescence	0.053 ppm (100 ug/m3)	Same as Primary Std.	Gas Phase Chemilumi-nescence
	1 Hour	0.25 ppm (470 ug/m3)		-		
Sulfur Dioxide	Annual Average	-	Ultraviolet Fluorescence	80 ug/m3 (0.03 ppm)	-	Pararosoaniline
	24 Hour	0.05 ppm [8] (131 ug/m3)		365 ug/m3 (0.14 ppm)	-	
	3 Hour	-		-	1300 ug/m3 (0.5 ppm)	
	1 Hour	0.25 ppm (655 ug/m3)		-	-	
Suspended Particulate Matter (PM_{10})	Annual Geometric Mean	30 ug/m3	Size Selective Inlet High Volume Sampler and Gravimetric Analysis	-	-	-
	24 Hour	50 ug/m3		150 ug/m3	Same as Primary Stds.	Inertial Seperation and Gravimetric Analysis
	Annual Arithmetic Mean	-	-	50 ug/m3		
Sulfates	24 Hour	25 ug/m3	Turbidimetric Barium Sulfate	-	-	-
Lead	30 Day Average	1.5 ug/m3	Atomic Absorption	-	-	Atomic Absorption
	Calendar Quarter	-		1.5 ug/m3	Same as Primary Std.	
Hydrogen Sulfide	1 Hour	0.03 ppm (42 ug/m3)	Cadmium Hydr-oxide STRactan	-	-	-
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm (26 ug/m3)	Tedlar Bag Collection, Gas Chromatography	-	-	-
Visibility Reducing Particles	1 Observation	In sufficient amount to reduce the prevailing visibility[9] to less than 10 miles when the relative humidity is less than 70%		-	-	-

Source: ARB Fact Sheet 38 (revised 7/88)

R.12/19/89

Figure 1.2.1 (cont.)

NOTES:

1. California standards for ozone, carbon monoxide, sulfur dioxide (1 hour) , nitrogen dioxide and particulate matter - PM_{10} , are values that are not to be exceeded . The sulfates, lead, hydrogen sulfide, vinyl chloride, and visibility reducing particles standards are not to be equaled or exceeded.

2. National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parenthesis are based upon a reference temperature of 25^{o} C and a reference pressure of 760 mm of mercury. All measurements of air quality are to be corrected to a reference temperature of 25^{o} C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent procedure which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

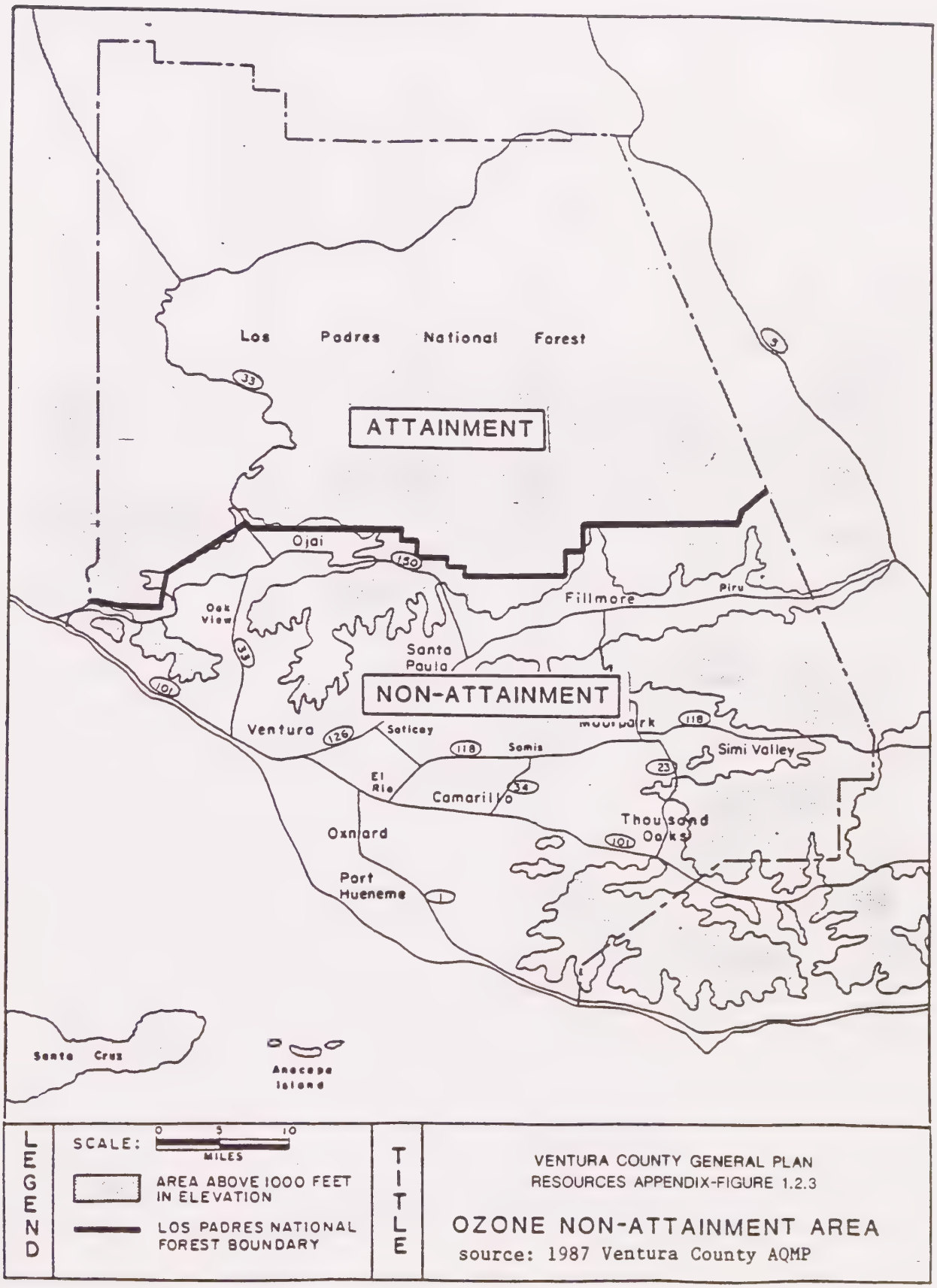
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the Environmental Protection Agency.

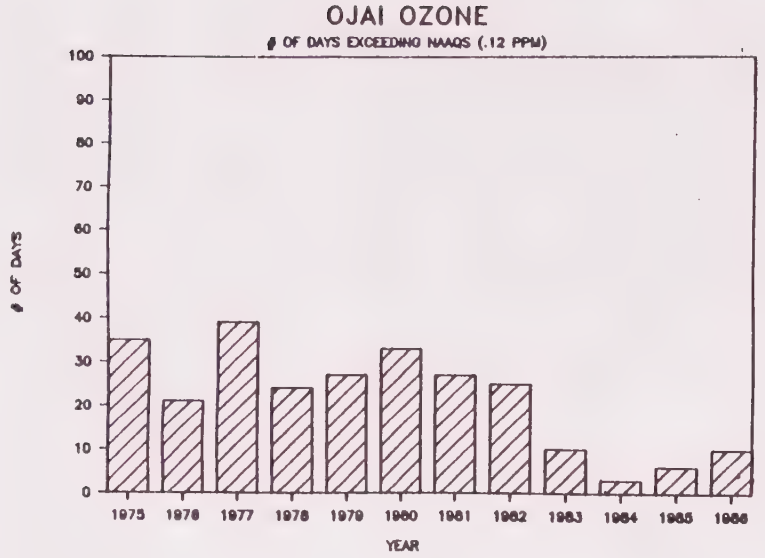
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the implementation plan is approved by the EPA.

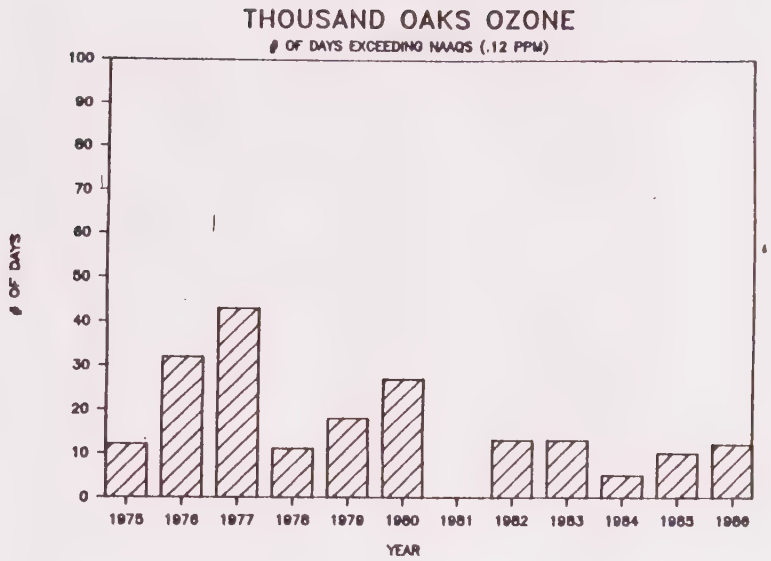
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8. At locations where the state standards for ozone and/or suspended particulate matter are violated. National standards apply elsewhere.

9. Prevailing visibility is defined as the greatest visibility which is attained or surpassed around at least half of the horizon circle, but not necessarily in continuous sectors.


Los Padres National Forest
ATTAINMENT
NON-ATTAINMENT
Ojai
Oak View
Santa Paula
Fillmore
Piru
Ventura
Saticoy
Somis
Moorpark
Simi Valley
El Rio
Camarillo
Oxnard
Thousand Oaks
Port Hueneme
Santa Cruz
Anacapa Island
33
150
101
126
118
23
34
LEGEND
SCALE: 0 5 10 MILES
AREA ABOVE 1000 FEET IN ELEVATION
LOS PADRES NATIONAL FOREST BOUNDARY
TITLE
VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.2.3
OZONE NON-ATTAINMENT AREA
source: 1987 Ventura County AQMP





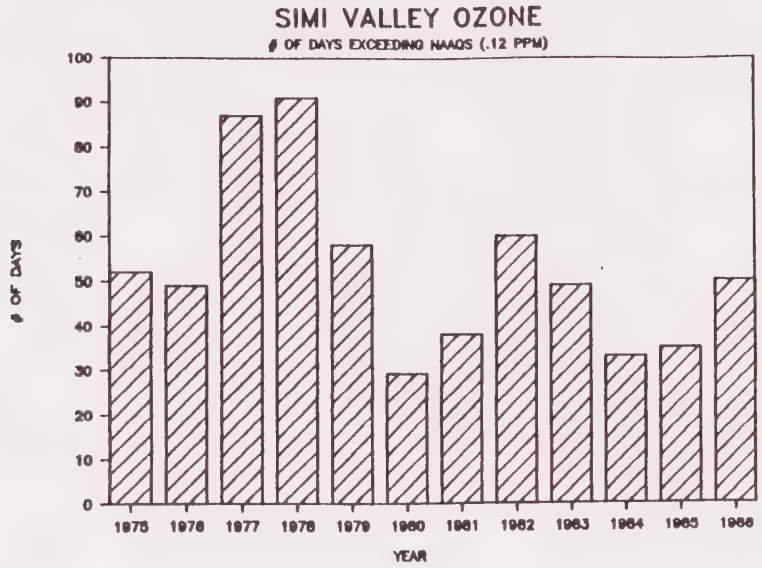
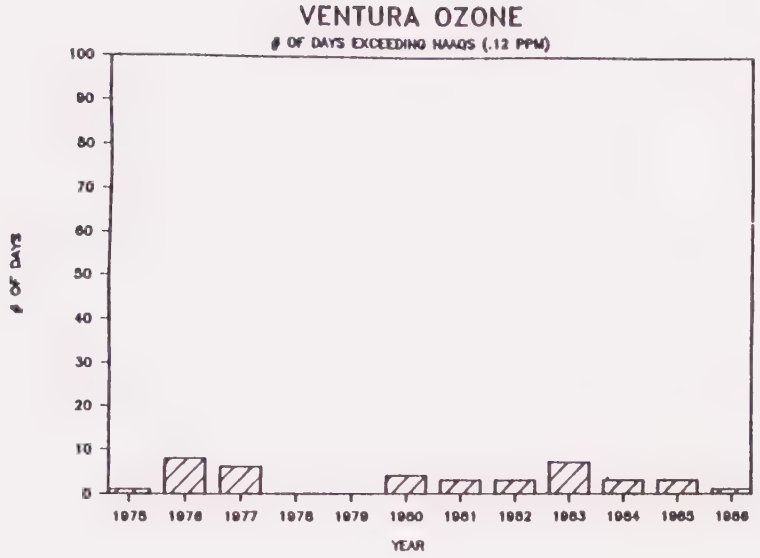
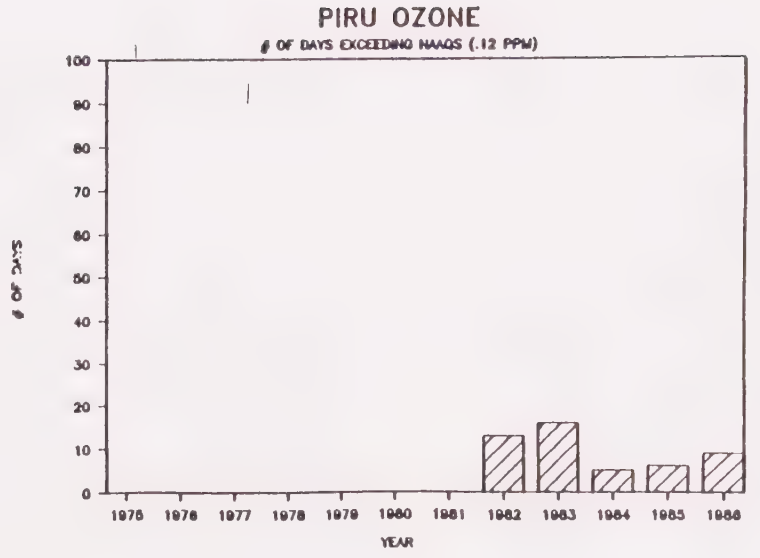


FIGURE 1.2.4
Number of Days
Exceeding the National
Ozone Standard
(Annual Statistics)

source: 1987 AQMP





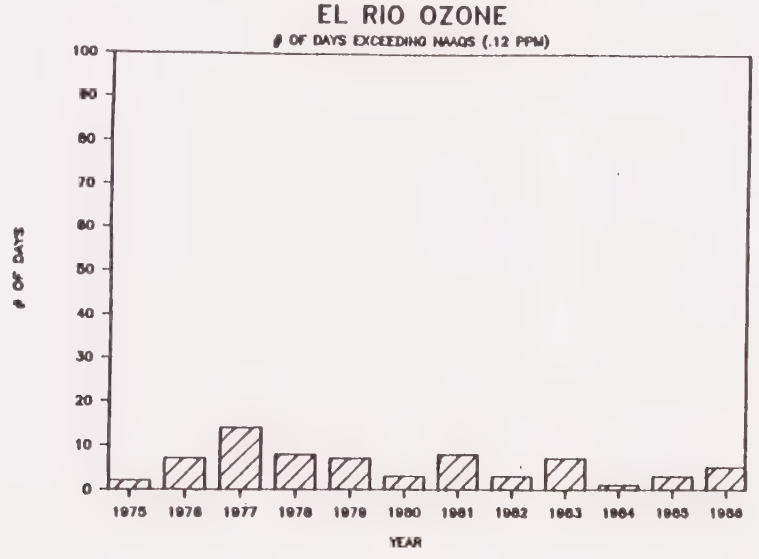


FIGURE 1.2.4 (Continued)

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1.3 WATER RESOURCES

The primary focus of this section is on the quality and quantity of water resources within Ventura County. Those sources are local groundwater, surface water and to a lesser degree, reclaimed water. Subsections below address these local water resources. The ocean, harbors, lakes and rivers can also be viewed as local "water resources" because of their transportational and recreational uses. These last mentioned uses of "water resources" are addressed in the Transportation and the Recreation sections of the Public Facilities and Services Appendix, and therefore, are not discussed further in this section.

An important companion section to this section is the Water Supply Facilities section in the Public Facilities and Services Appendix. The Water Supply Facilities section emphasize the storage, delivery systems and the ultimate use of local ground and surface water, as well as imported water, for human needs (i.e., potable and agricultural).

1.3.1 GROUNDWATER RESOURCES

In 1991, 67% (285,000 acre feet [AF]), of the water that was consumed in the County came from local groundwater sources. Agricultural uses amounted to 86% (245,100 AF) of the groundwater that was utilized. Because it is estimated that the local groundwater basins can safely supply only about 242,000 AF/year countywide, water users are extracting at least 43,500 AF/year more than is being naturally and artifically replenished. Groundwater is pumped extensively by individual well owners as well as water purveyors who sell it through either retail sales to individuals or wholesale to other purveyors. Since more groundwater is used than is replaced, overall, the County's groundwater reserves are slowly decreasing.

The largest groundwater supplies in the county are contained within major water bearing aquifers which underlie most of the Oxnard Plain and Las Posas Valley. These are, in order of depth, the Oxnard, Mugu, Hueneme, Fox Canyon, and Grimes Canyon aquifer zones. These aquifers are most easily visualized as lying horizontally, often one on top of the other, with clay layers separating them (Figure 1.3.1). In contrast, groundwater basins may be considered vertical "columns" that run through several aquifers and which are capable of furnishing a substantial amount of water. The size of groundwater basins as measured by their surface area can range from small to as large as the Oxnard Plain (See Figure 1.3.2).

Water feeds into groundwater basins from watersheds at ground level which often have surface areas which are much larger than that of the groundwater basin being supplied. Because the use of water within a watershed will dictate the amount of water ultimately reaching a groundwater basin, the watersheds serving the respective groundwater basins have been described on the Water Basins map (Figure 1.3.2) rather than just the basin itself. When groundwater is pumped at a greater rate than water recharge to the basin, an overdraft situation is created. The most severe local overdraft occurs in areas of heavy agricultural usage.

Beneath the Oxnard Plain, the Oxnard Aquifer zone was overdrafted at the rate of about 26,500 AF/year from 1989 to 1990. This overdraft situation has resulted in more than 22 square miles of the Oxnard Aquifer being intruded by seawater (see Figure 1.3.3). The County Water Quality Management (208) Plan outlines the adopted solution to this problem. This project involves the new (1991) Vern Freeman Diversion Structure (which spans the Santa Clara River in the vicinity of Saticoy) that diverts surface flow into the newly constructed Pumping Trough Pipeline and into the United Water Conservation District's aquifer recharge basins. This water, together with water from five deep wells in the Fox Canyon Aquifer, is delivered to users in the Oxnard Plain who in turn stopped using shallow wells in the intruded Oxnard aquifer.

The Fox Canyon aquifer zone is being overdrafted at a rate of approximately 18,700 acre feet per year. There is very little recharge to

this aquifer, therefore, any amount of use will result in overdraft. Water supplies in the Fox Canyon Aquifer are extensive and are expected to last for at least 100 years, with the exception of the North Las Posas Valley area. Groundwater supplies in outlying portions of the North Las Posas basin are expected to be exhausted within the next thirty to fifty years. Overdraft in these outlying portions is currently occurring at a rate of about 10,000 acre feet per year. The Fairview area will be the first to experience a groundwater shortage. Total overdraft countywide is at least 43,500 AF/year.

The Fox Canyon Groundwater Management Agency (GMA) was created by State legislation in 1982 to manage groundwater with the objective of controlling overdrafting. The GMA has prepared a plan for this purpose which is being implemented by the County, cities and various water agencies. Figure 1.3.1 shows the geographical area governed by the GMA.

In the North Half, groundwater constitutes the principal developed water supply. The largest quantity of acceptable quality water occurs in recently deposited alluvial materials in and adjacent to present stream channels.

The major groundwater basins in the North Half are the Lockwood Valley and the Cuyama Valley Basins. Other less significant water-bearing areas, in terms of storage capacity, are Little Cuddy Valley, Hungry Valley, Mutau Flat and alluviated portions of Piru and Sespe Creeks. In addition, recent studies conducted by a private consultant on Pine Mountain indicate the occurrence of relatively large quantities of good quality groundwater. Initial information indicates that groundwater in the vicinity of Pine Mountain occurs in rocks which are much older than those normally considered water-bearing.

The North Half Area Hydrologic Balance Study, 1978, provides a detailed description of ground and surface waters of the North Half.

1.3.2 SURFACE WATER RESOURCES

Surface water provides 11% of the water used in Ventura County. Surface water resources in Ventura County are divided into two major hydrologic units (the Ventura River and Santa Clara-Calleguas Units) and into four other smaller hydrologic units (Rincon Creek, Cuyama, San Joaquin, and the Malibu Hydrologic Units). However, the major surface water source in the County is Lake Casitas.

The Casitas Municipal Water District (CMWD) has the primary responsibility for the development and delivery of water in the Ventura River drainage. Lake Casitas Reservoir has a capacity of 254,000 acre-feet of storage, with a "safe yield" of approximately 21,900 acre-feet per year. The CMWD is presently supplying this maximum yield (CMWD, 1990). Approximately 45% of the inflow to Casitas Reservoir comes from runoff from the 34-square-mile direct drainage area. The remainder is diverted to Casitas from the 74-square-mile Ventura River-Matilija Creek Watershed through the Robles-Casitas Canal. The City of Ventura diverts approximately 6,000 AF/year from the Ventura River by means of a surface diversion and wells near Foster Park.

The United Water Conservation District (UWCD) manages Lake Piru and is responsible for wholesale water distribution throughout most of the Santa Clara River Valley. Lake Piru is United's storage reservoir for water which is later released into underground aquifers for subsequent wholesale to various retail water purveyors and agricultural use. The capacity of Lake Piru is 88,000 acre-feet, with an annual safe yield of 15,000 acre-feet per year. UWCD also collects Santa Clara River water at the Freeman Diversion for aquifer recharge and direct delivery. UWCD delivers diverted Santa Clara River flows to the Pleasant Valley County Water District and areas of Oxnard plain for agricultural use.

Lake Piru also has extensive recreational facilities which are used to capacity for much of the year. The Piru Creek drainage above Lake Piru contains limited surface water, and provides some recreation. Future releases of water from the State Water Project through Pyramid Rock Reservoir in Los Angeles County will improve surface water conditions and recreational opportunities above Lake Piru. Further discussion of recreation facilities in the County is contained in the Public Facilities and Services Appendix.

Surface water is also diverted for agricultural use by private individuals along the Ventura and Santa Clara Rivers. Several small mutual water companies use springs as their source.

Streams in Ventura County that generally flow for the entire year include Sespe Creek, Piru Creek, Reyes Creek, Matilija Creek, the North Fork of the Ventura River, and Ventura River below Foster Park. These creeks plus other small tributaries have extensive riparian zones and provide habitat for a variety of vertebrates such as rainbow trout, and are discussed under "Biological Resources."

The Calleguas Municipal Water District is responsible for providing imported water to the southeastern portions of the County. Lake Bard serves as a terminal storage reservoir with a capacity of 10,500 acre-feet.

Other County lakes are: Lake Sherwood (a 154 acre private lake whose principal use is recreation), Lake Eleanor (a four acre lake owned by the Conejo Open Space Conservation Agency), and Matilija Lake (operated by the CMWD, recreational use not permitted).

Though not a source of potable or irrigation water at this time, the Pacific Ocean is an important water resource because it is a potential source for water desalination plants. Depletion of ocean water quantity is not an issue, however degradation of water quality is of concern particularly when unhealthful conditions arise at swimming beaches. The principal sources of contamination are urban and agricultural runoff and the ocean outfalls of wastewater treatment facilities. In addition, off-shore petroleum production facilities occasionally spill hazardous materials into the ocean. At present, no significant ongoing degradation of ocean water quality has been identified, however, periodic wastewater treatment facility upsets have resulted in temporary closure of County beaches.

1.3.3 RECLAIMED WATER

Water reclamation refers to the recycling or reuse of either treatment plant effluent (wastewater) or industrial process water. Reuse can occur onsite or be transferred to other uses offsite following treatment. The uses to which this reclaimed water can be put (e.g., irrigation, cooling) depend upon the quality of the used water and the quality required for subsequent uses.

In 1991, reclaimed water provided about 0.5% of the Countywide water supply. Three of the 16 sewage treatment plants in Ventura County currently reclaim a portion of their effluent. Over a third of the Camarillo County Sanitation District's effluent is used for agricultural, parks and golf courses and a portion is released for estuary enhancement. The Camrosa County Water District reclaims water for agricultural irrigation. The Las Virgenes Municipal Water District has implemented a water reclamation project for urban landscaping in Los Angeles County The Las Virgenes MWD reclaimed water is also used in Ventura County for golf course irrigation at Lake Sherwood. Additionally, reclaimed water from Los Angeles County is being delivered to the Oak Park Area. In 1982, Camarillo Sanitary District completed an expansion of their existing reclamation for agricultural irrigation by increasing the capacity from 4.75 million gallons per day to 6 million gallons daily.

Several studies and proposals exist in the County for expanding existing reclamation or initiating new reclamation projects.

(1) The City of Ventura is examining the possibility of increasing reclamation.

(2) Two large scale reclamation projects were studied in 1981 under a Federal Clean Water (Section 201) grant. Both projects would supply agricultural irrigation water which has been treated at a tertiary level.

- Simi Valley Sanitation District Treatment Plant: This project involves supplying the agricultural area in the Las Posas Valley with approximately 6,000 AF/year over the next 15-20 years. Farmers in the Las Posas Valley currently obtain their water from the Fox Canyon Aquifer which is seriously overdrafted. As of 1987, the County was still seeking funding to construct the facilities for irrigation in the Las Posas Valley.

- Thousand Oaks Hill Canyon Treatment Plant: This project would result in the conveyance of about 7,000 AF/year of treated effluent to Oxnard Plain agricultural users, the largest agricultural area in the County. Use of this water would reduce demands on the Oxnard Plain's overdrafted aquifers.

The primary potential uses of reclaimed water in Ventura County are agricultural irrigation and irrigation of non-agricultural land such as parks and golf courses. The water quality standards which apply to these uses vary and are based on State and Federal Standards.

1.3.4 WATER QUALITY

Water quality of the major reservoirs (Lake Casitas, Lake Piru and Bard Reservoir) has remained constant and is generally of good quality. However, during rainy periods, Lake Casitas exceeds the State domestic water turbidity maximum contaminant standard. Casitas has received a compliance order from the State Department of Health Services to meet this standard by January 1992. Recent and upcoming revisions to State drinking water standards may also require additional treatment of the domestic waters of the County. Surface water quality of County rivers and streams fluctuates from season to season but is adequate in most areas for agricultural use.

Threats to surface and groundwater quality include; urban, industrial and agricultural runoff, septic system failure, hillside agricultural erosion, abandoned water wells, underground storage tanks and various point sources. The Water Quality Management (208) Plan contains regional policies for protection of water quality and groundwater resources. Various assumptions of the Water Quality Management Plan are based upon the population/land use forecasts of the Countywide Planning Program. These same forecasts guide the Land Use Chapter (of the General Plan) and appear in the Land Use Appendix.

Groundwater resources are most susceptible to contamination at aquifer recharge areas (see Figure 1.3.4). Aquifer recharge areas generally have highly permeable soils which can readily pass surface (and subsurface) contamination to the groundwater. In addition, overcovering of aquifer recharge areas with nonpermeable surfaces interferes with recharge.

Mining operations in proximity to aquifer recharge areas can potentially degrade water quality. If mining is conducted below the present or projected high groundwater level, ground water may come in contact with surface contaminants. Mining or flood control operations in river channels can affect surface water quality including increasing turbidity. Return waters from mining operations, which re-enter the groundwater table after being exposed to evaporation, can increase TDS levels.

Improperly designed, installed and maintained septic systems could potentially contaminate groundwater and surface water supplies. Also, industrial and commercial developments on septic sytems could potentially lead to degradation of groundwater supplies from intentional or unintentional discharges of hazardous wastes into these systems.

Potential threats to groundwater quality are also posed by solid waste disposal sites via leachate or gas transport. To date, no sigificant contamination of significant groundwater basins has been identified in conjunction with County landfills. However, the shallow semi-perched aquifer in the vicinity of the Coastal and Bailard landfills has been degraded, in part due to landfill leachate. All landfills are subject to ongoing monitoring in compliance with Title 23 of the California Administrative Code. Development of new or expanded landfill sites will be subject to CEQA review to ensure that potential impacts are mitigated (California Water Quality Control Board-Los Angeles Area, 9/1/87). The Public Facilities and Services Appendix maps waste disposal sites.

Numerous abandoned hazardous waste sites exist in the County, many of which have contaminated shallow groundwater to some degree. However, large-scale contamination of significant groundwater resources has not been identified (Environmental Health Division, 1987).

Groundwater quality can be estimated through the concentration of total dissolved solids (TDS). This value represents the concentration of all minerals and trace elements and is used as a general indication of quality. According to the Public Works Agency, TDS values which range from less than 200 to 700 mg/1 are considered excellent to good; values from 700 to 2,000 mg/1 are good to injurious, and values over 2,000 mg/1 are considered injurious to unsatisfactory for agricultural irrigation.

Concentration of TDS in groundwater within the County ranges from 300 mg/1 to over 3,000 mg/1. The best quality water is in portions of the Fox Canyon aquifer zones, while the worst is along the edges of the Santa Clara Valley and in seawater intruded portions of the Oxnard aquifer zones. Overall TDS concentrations for groundwater averaged 1,158 mg/1 in 1975. Degradation is occurring at a rate of about 1% per year. This will result in a TDS concentration of approximately 1,480 mg/1 by the year 2000, which places the water in the good to injurious category.

In some areas of the County, the use of septic systems along with agricultural fertilization intermittently degrade groundwater quality. The Regional Water Quality Control Board and the County Environmental Health Division, have identified areas where higher nitrate concentrations in local groundwater exceed State Drinking Water Standards. Those areas include the groundwater basins in the Santa Rosa and Tierra Rejada Valleys and in the El Rio/Nyeland Acres area. Ingestion of nitrate contaminated water by children less than one year old could result in methemoglobinemia (aka: "blue baby" syndrome), a sometimes fatal blood disease. State Drinking Water Standards limit nitrate NO_3 concentrations to 45 milligrams per liter in an effort to prevent the disease in infants.

The State has also established standards for: microbiological contaminants, organic contaminants, heavy metals, inorganic pollutants and radiological content.

Figure 1.3.5 summarizes the groundwater quality and quantity status of the various basins in the south half of the County. Figure 1.3.6 provides further refinement of the water quality of the various basins.

The County implements several programs to protect surface and groundwater quality. The Urban Runoff Program and Hillside Erosion Control Ordinance are administered by the Public Works Agency. The Environmental Health Department administers an underground storage tank program, septic system regulation and County Service Area 32-a program capable of contending with septic system problems.

Water conservation can forestall depletion of water resources and the need to construct costly new water facilities. The County and the three major water wholesalers jointly fund the Countywide Water Conservation Program. This program includes a full-time Water Conservation Coordinator, County Water Conservation Management Plan and various other program activities.

1.3.5 CONCLUSIONS

- Groundwater resources are being overdrafted and contaminated by seawater intrusion. The County can combat this problem by participation in the Fox Canyon Groundwater Management Agency, the Seawater Intrusion Abatement Program, the Countywide Water Conservation Program, and by seeking to develop new water sources such as reclaimed water.

- Depletion or degradation of water resources could be prevented by effective resource management. General Plan Goals, Policies and Programs should provide for monitoring and management of water resources.

- Contamination of surface and groundwater can occur due to mining, grading, faulty septic systems, wells and underground tanks, waste disposal sites, runoff, and various **point sources**. Groundwater resources are most susceptible to contamination at aquifer recharge areas. General Plan Goals, Policies and Programs should address the above.

- From all the water reclamation alternatives that were studied, two were recommended for further consideration. Both plans would supply reclaimed water to overdrafted groundwater basins within the Fox Canyon Groundwater Management Agency. Financial feasibility will depend on issuance of a state grant and/or a low interest rate loan.

REFERENCES CONSULTED

Ventura County Planning Division, Ventura County General Plan, Conservation and Open Space Elements, 1986, with North Half Technical Appendix, 1986.

Ventura County Board of Supervisors, Ventura County 208 Areawide Water Quality Management Plan, 1979-1980

Ventura County Planning Division, Ventura County Water Conservation Management Plan, 1987

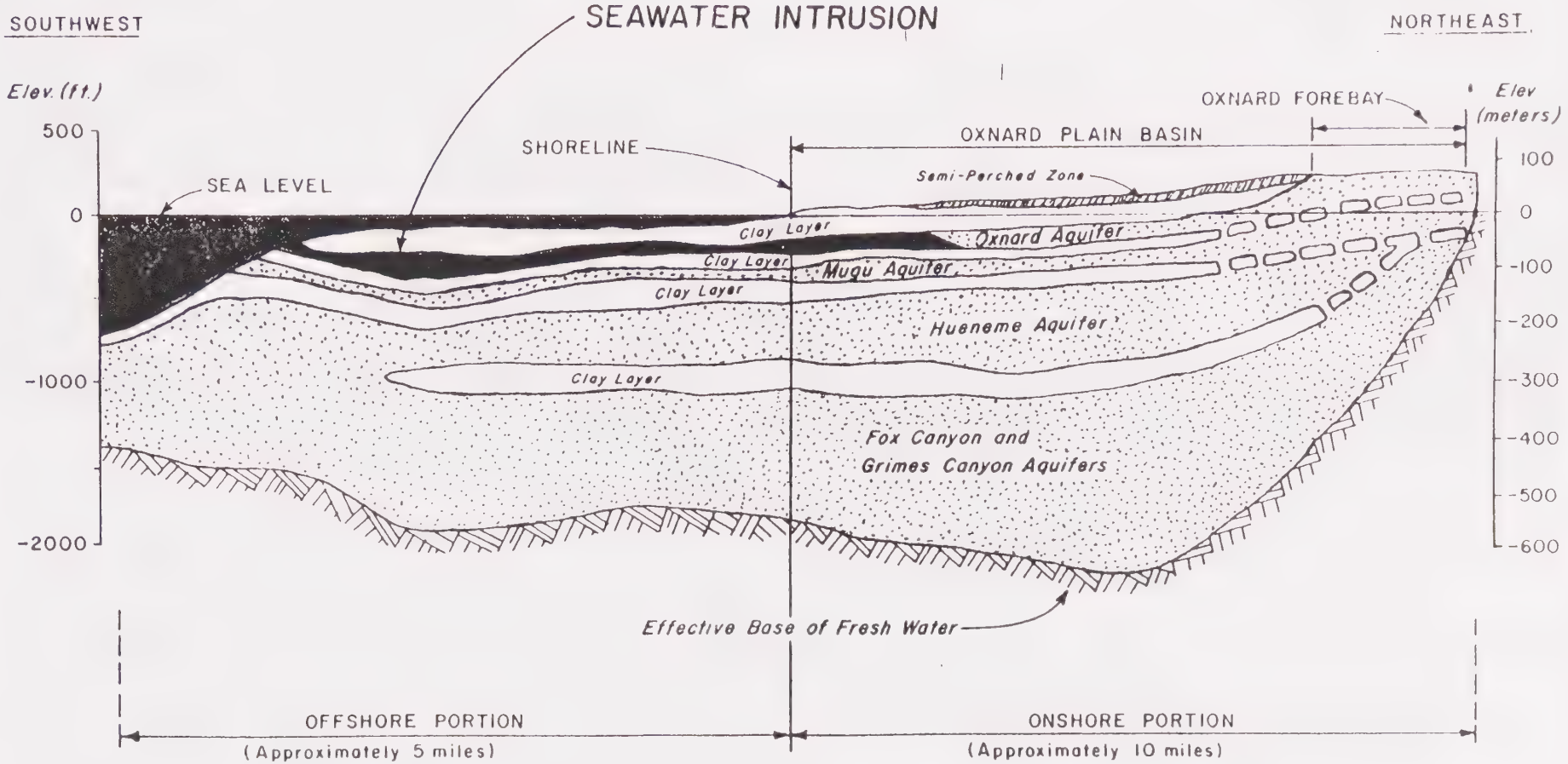
Ventura County Resource Management Agency, (Ventura) Countywide Wastewater Reuse Study, 1980

Ventura County Public Works Agency, Flood Control, Ventura County Quadrennial Report of Hydrologic Data, 1986

Ventura County Public Works Agency, Flood Control, Ventura County North Half Area Hydrologic Balance Study, 1978

Ventura County Public Works Agency, Flood Control, Fox Canyon Groundwater Management Agency Planning Study, March 1984

Ventura County Planning Division, Water Conservation Program, Our Water Resources (pamphlet, 1986)



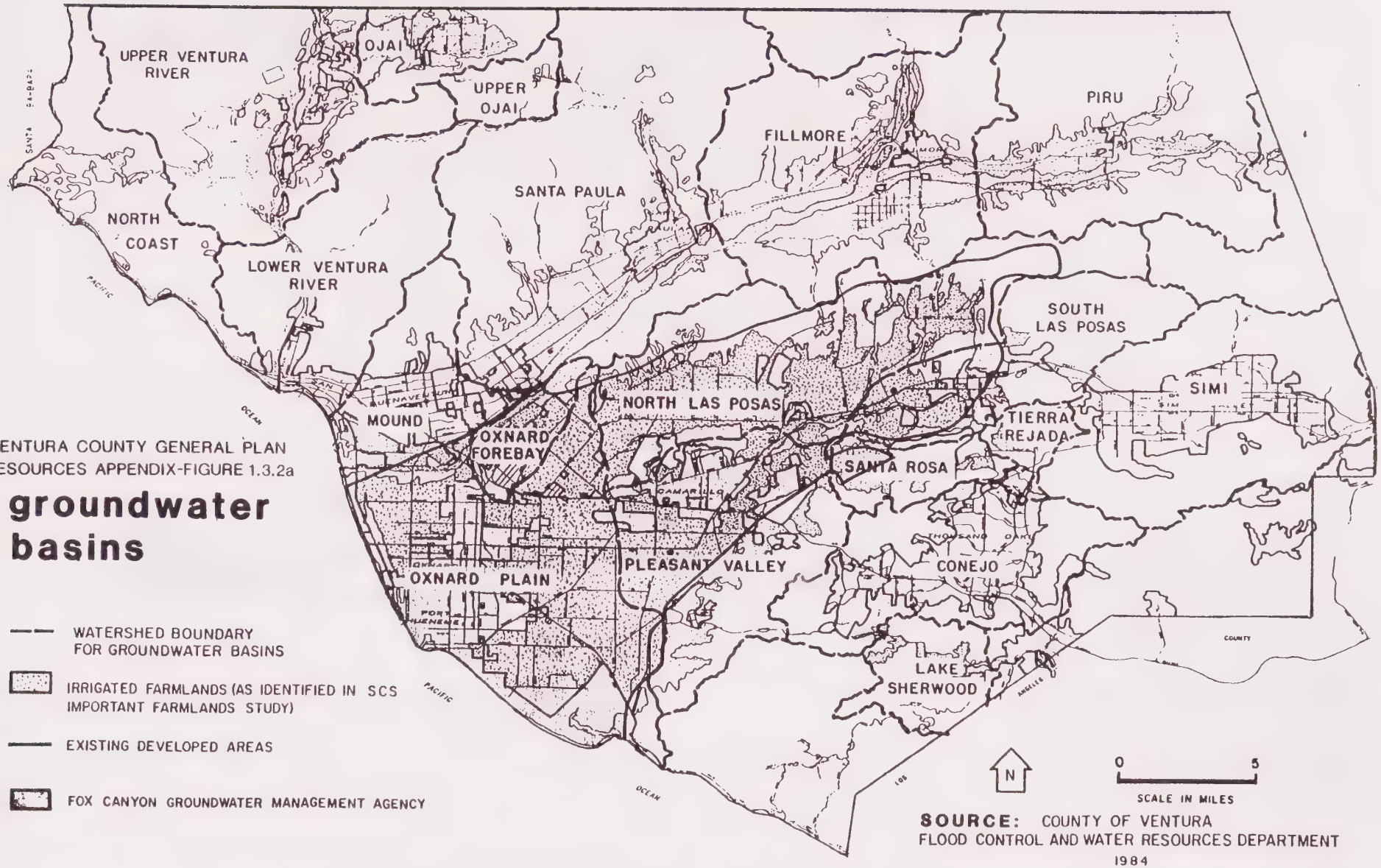
VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.3.1

OXNARD PLAIN – SCHEMATIC OF UPPER AND LOWER AQUIFERS

modified from DWR Bulletin No. 104-8, Nov. 1976

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.3.2a

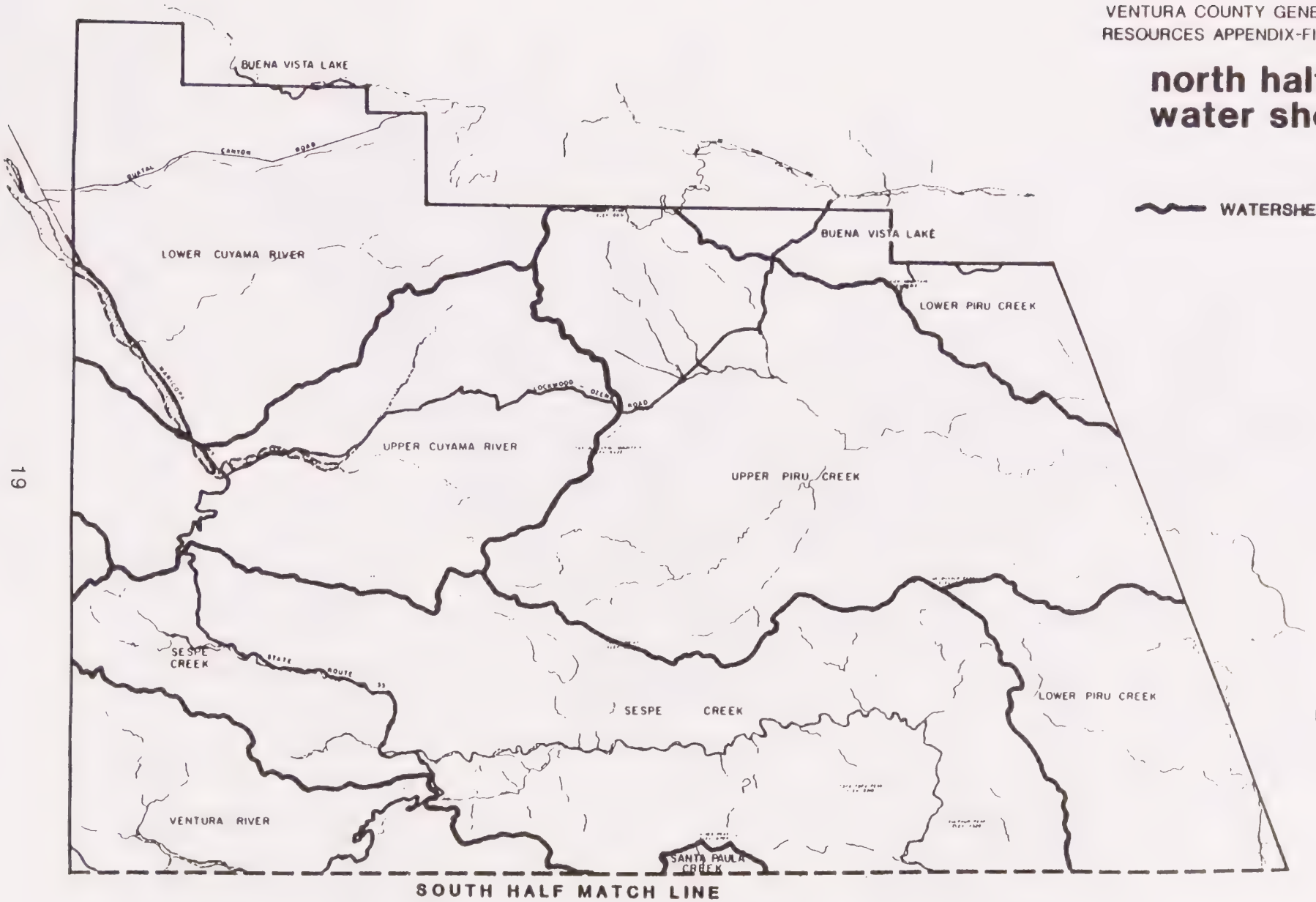
groundwater basins



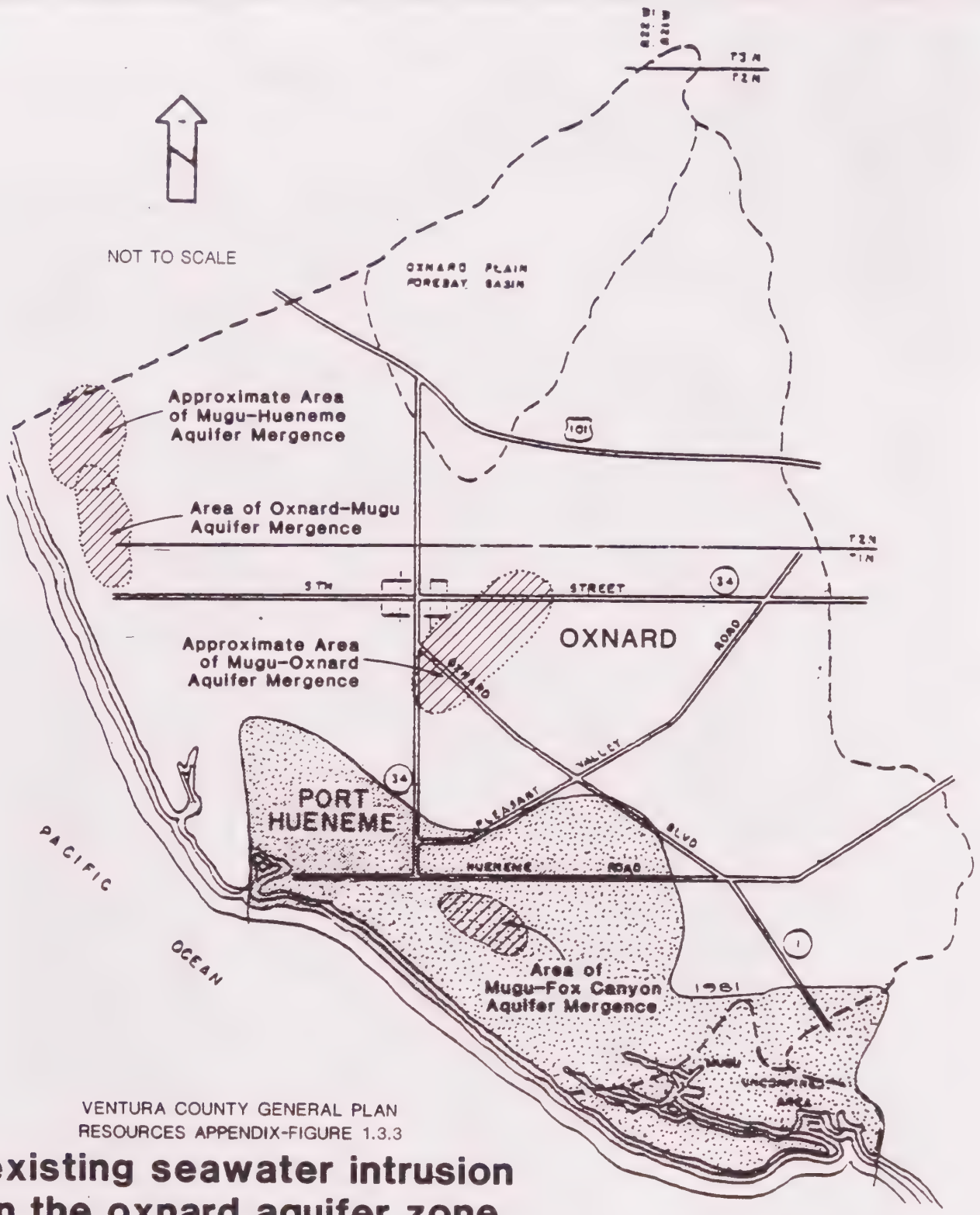
SOURCE: COUNTY OF VENTURA
FLOOD CONTROL AND WATER RESOURCES DEPARTMENT
1984

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.3.2b

north half water sheds



SOURCE: USDA - FOREST SERVICE 1986

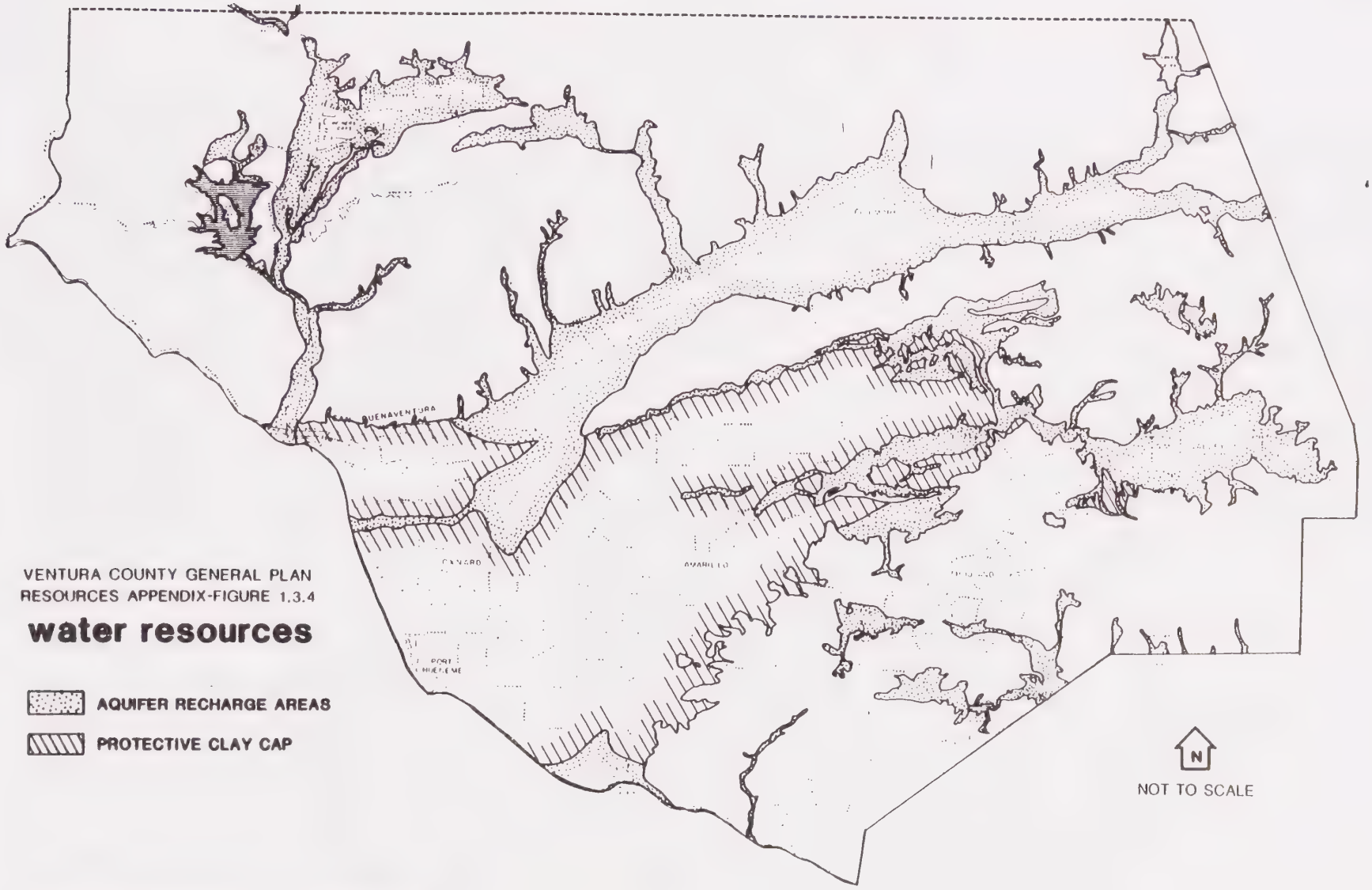


VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.3.3

existing seawater intrusion in the oxnard aquifer zone.

NOTE:
INTRUSION EXTENDS APPROX. 22 SQ. MILES

SOURCE: VENTURA COUNTY FLOOD CONTROL DISTRICT
JULY 1982



VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.3.4

water resources

AQUIFER RECHARGE AREAS

PROTECTIVE CLAY CAP

N

NOT TO SCALE

SOURCE: VENTURA COUNTY FLOOD CONTROL AND WATER RESOURCES DEPARTMENT

NOTE: INFORMATION NOT AVAILABLE FOR NORTH HALF

FIGURE 1.3.5
WATER RESOURCES QUANTITY AND QUALITY SUMMARY SHEET*

AREA	WATER SUPPLY AVAILABILITY (1988)[1]	WATER SUPPLY AVAILABILITY (2000)	WATER QUALITY 1981[2]	WATER QUALITY (2000)
Piru	Adequate [3]	Adequate	Good to injurious	All basins are expected to have poorer water quality by the year 2000. There is approximately a 1% per year degradation. This could mean that a Basin quality of "good to injurious" may become injurious to unsatisfactory.
Fillmore	Adequate	Adequate	Good to injurious	
Santa Paula	Adequate	Adequate	Good to injurious	
Mound	Adequate	Adequate	Good to injurious	
Oxnard Forebay	Adequate	Adequate	Good to Injurious	
Oxnard Plain [4]	Overdraft	Adequate Oxnard Aquifer [5] Overdraft-Fox Canyon [6]	Good to Injurious	
Pleasant Valley	Minor Overdraft	Overdraft Fox Canyon	Excellent to injurious	
Upper Ojai	Adequate	Adequate	Excellent to good	
Ojai	Approaching Overdraft	May be overdrafted (Study of this basin to determine actual safe yield is necessary)	Good to injurious	
Upper Ventura	Adequate	Adequate	Excellent to good	
Lower Ventura	Adequate (Imported CMWD)	Adequate (Imported CMWD)	Injurious to unsatisfactory	
North Law Posas	Serious Overdraft	Basin depletion in 30-50 years (after year 2000)	Excellent to injurious	
South Las Posas	Adequate	Adequate	Good to unsatisfactory	
Santa Rosa	High water Levels	High water Levels	Good to injurious	
Tierra Rejada	Adequate	Adequate	Good to injurious	
Simi Valley	High water Levels	High water Levels	Good to unsatisfactory	
Thousand Oaks	Adequate (Imported SWP)	Adequate (Imported SWP)	Good to injurious	
Lake Sherwood	Adequate	Adequate	Good to injurious	
North Coast	Adequate (Imported CMWD)	Adequate (Imported CMWD)	Good to unsatisfactory	

[1] Current practices in water use have been assumed to continue up to the year 2000.
[2] Water quality has been classed according to its use by agriculture. (Ref II-10).
[3] Adequate means that supplies are available to meet demands.
[4] The Oxnard Aquifer within the Oxnard Plain is most severly overdrafted which has resulted in seawater intrusion. Water quality within the intruded area has degraded to the point where the water is not suitable for agriculture.
[5] Assumes implementation of entire Oxnard Plain Seawater Intrusion Control Project.
[6] Total overdraft of the Fox Canyon Aquifer allowed by the Fox Canyon Groundwater Management AAgency is approximately 20,000 AF/YR. At this rate, supplies will last over 100 years (with the exception of the North Las Posas Valley).
*Water is imported from agencies indicated, but "Adequate" levels of availability may change over time.

Figure 1.3.6

GROUND WATER BASIN QUALITY AS COMPARED TO AGRICULTURAL AND STATE DRINKING WATER STANDARDS

All values are expressed in milligrams per liter (mg/1)

	TDS	CHLORIDE	SULFATE	EC	NITRATE	BORON	pH
Domestic Water Quality State Regulations, 1977	Recommended 500 upper 1,000	Recommended 250 upper 500	Recommended 260 upper 500	Recommended 900 upper 1600	No_3 Recommended 45	B N/A	N/A
Agricultural Water Quality Requirements	500 - 1500	140-240		700-2600*		0.7-2.0	4.8-8.3
Typical values for basin quality							
Piru Basin	1370	82	581	1832	25.0	0.6	7.3
Fillmore	1141	38	496	1477	32.0	0.9	7.4
Santa Paula	1235	71	537	1601	19.0	0.6	7.9
Mound	1126	58	548	1572	42.0	0.7	7.7
Lower Ventura	1670	369	484	2415	8.0	0.7	7.9
Upper Ventura	684	59	211	940	17.0	0.63	7.7
Ojai	546	32	166	831	40.5	0.0	8.0
Oxnard Plain	1152	57	475	1436	20.0	0.4	7.7
Pleasant Valley	1140	188	439	1770	5.0	0.6	8.0
North Las Posas	506	32	159	728	9.5	0.3	8.0
South Las Posas	2154	272	974	3910	4.8	1.20	8.0
Santa Rosa	1200	150	221	1347	46.0	0.2	8.0
Tierra Rejada	920	114	194	2306	46.8	0.02	8.0
Simi Valley	1859	NA	NA	NA	NA	NA	NA

*Depends on type of crop grown

N/A Not Applicable
NA Not Available

Source: Feasibility of Importation of State Project Water; Engineering Science, Inc. December 1975.

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1.4 MINERAL RESOURCES

The following sections discuss aggregate resources, petroleum resources and other mineral resources.

1.4.1 AGGREGATE RESOURCES

This section discusses the provisions of State law pertaining to mineral resource management and the County's program for compliance.

Implementation of the County program is discussed in the General Plan Goals, Policies and Programs. This section is chiefly derived from the "Technical Appendix, Mineral Resource Background Report, the Conservation and Open Space Elements," 1985.

1.4.1.1 State Law

The **Surface Mining and Reclamation Act (SMARA) of 1975** has two basic objectives. One is to ensure the proper reclamation of surface mining operations, and the other is to safeguard access to mineral resources of regional and Statewide significance in the face of competing land uses and urban expansion.

To ensure proper reclamation of mining sites, the SMARA requires all jurisdictions in which mining occurs to adopt a reclamation ordinance and have it certified by the State Mining and Geology Board (Sec. 2774.3(a) SMARA). Ventura County has adopted such an ordinance (Sec. 8107-9 of the Zoning Code) which was found to be acceptable by the State Board.

While the SMARA references mineral resources in general, the only resources that the State Division of Mines and Geology have surveyed are those which are capable of being used in construction (sand and gravel or crushed rock). The survey process involved two phases. The first phase consisted of the "classification" of areas containing significant mineral deposits which are threatened by land uses incompatible with or which would preclude **mining**. The second phase of the survey process is referred to as "designation", and is the formal recognition by the State Mining and Geology Board of areas containing mineral deposits of regional or Statewide significance which should be protected from land uses incompatible with mineral extraction. The designation process in Ventura County included public hearings and consultation with local agencies and parties of interest. Hearings were held in January of 1982 and the official maps identifying the areas so designated were sent to the County in June of 1982.

The paragraphs that follow address the pertinent aspects of the SMARA:

The Mandate for Mineral Resource Protection - Pursuant to Sec. 2762(a) of the Government Code:

"Within 12 months of the designation of an area of statewide or regional significance within its jurisdiction, every lead agency shall, in accordance with state policy, establish mineral resource management policies to be incorporated in its general plan which will:

a. Recognize mineral information classified by the State Geologist and transmitted to the Board.

b. Assist in the management of land use which affect areas of statewide and regional significance.

c. Emphasize the conservation and development of identified mineral deposits."

Guidelines for Mineral Resource Protection - While Sec. 2762(a) is the specific mandate for mineral resource protection, the section provides

relatively little guidance as to implementation. Fortunately, the SMARA contains other sections which can provide additional guidance.

Pursuant to Sec. 2712, it is the intent of the legislature to assure that:

"(a) Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses.

(b) The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.

(c) Residual hazards to the public health and safety are eliminated."

Pursuant to Sec. 2713, "...it is not the intent of the Legislature... to take property for public use without payment of just compensation in violation of the California and United States Constitutions."

Pursuant to Secs. 2715(e) and (f), no provision in the SMARA is a limitation:

"(e) On the power of any lead agency to adopt policies, standards, or regulations imposing additional requirements on any person if the requirements do not prevent the person from complying with the provisions of this chapter.

(f) On the power of any city or county to regulate the use of buildings, structures, and land as between industry, business, residents, open space (including agriculture, recreation, the enjoyment of scenic beauty, and the use of natural resources), and other purposes."

Sec. 2792 addresses additional limitations on the power of the SMARA over local land use matters. The adoption of regulations or the "designation" of an area shall not limit or modify the rights of any person to complete a project approved prior to the "designation" of the area in question. Furthermore, the SMARA does not authorize any local governmental agency to abridge the vested development rights of any individual.

Pursuant to Sec. 2763(a) and (b), land use decisions made by a lead agency, such as the County, relative to areas of regional or Statewide significance shall, "...in balancing mineral values against alternative land uses, consider the importance of these minerals to their market regions as a whole and not just their importance to the lead agency's area of jurisdiction." Furthermore, consideration shall also be given to "...the importance of the mineral resources to the state and nation as a whole."

In addition to the informal guidance provided by the above referenced sections of the SMARA, the State Division of Mines and Geology has prepared "Mineral Resource Management Goals and Policies" which, in accordance with the SMARA, provide additional guidance in the preparation of the County's MRMP. These are quoted below:

"1. Mineral Resources Management Goals

Management of identified mineral resources by local government should be directed toward the following goals:

(a) Mineral lands classified **MRZ-2** or designated as areas of Statewide or of regional significance should be protected from preclusive and incompatible land uses so that the mineral resources within these lands and areas are available when needed.

(b) Surface mining within these classified lands and designated areas should be controlled to assure that:

(1) Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses.

(2) The production and conservation of minerals are encouraged, while giving consideration to recreation, watershed, wildlife, range and forage, aesthetic enjoyment, and other environmental factors.

(3) Residual hazards to the public health and safety are eliminated.

Mineral Resource Management Policies

Mineral resources management policies developed by local government pursuant to the Surface Mining and Reclamation Act and Board Guidelines should:

(a) Establish land-use categories which will allow for timely mineral extraction to meet projected demand in areas classified as MRZ-2 or designated to be of regional or Statewide significance, and establish regulations for these land-use categories which will protect them from land uses which would preclude mineral extraction.

(b) Develop and implement regulations to ensure that adequate supplies of mineral commodities are developed under a diversity of ownership to protect the consumer against the effects of restricted competition.

(c) Develop and implement regulations which will buffer land-use categories permitting mineral extraction from uses incompatible with mining.

(d) Develop and implement regulations to ensure that after mitigative measures are taken, a proposed mining operation will not create any significant nuisances, hazards, or adverse environmental impacts.

(e) Develop and implement regulations to ensure that all mining operations provide for adequate reclamation of mined lands before issuing mining permits."

In addition to the suggested goals and policies quoted above, the State has provided an initial listing of land use categories which are considered compatible and incompatible with mining activities. The listing that follows will help in the development of land use regulations to safeguard access to mineral resources.

"The following land use categories are provided as a guide to local government in establishing compatible land uses on or adjacent to mineral lands classified as MRZ-2 or designated as areas of regional or statewide significance:

Incompatible - Land uses inherently incompatible with mining and/or which require a high public or private investment in structures, land improvements, and landscaping, and which would prevent mining because of the higher economic value of the land and its improvements.

Examples of such uses include:

High density residential
Low density residential with high unit value
Public facilities
Intensive industrial
Commercial

Compatible - Land uses inherently compatible with mining and/or which require a low public or private investment in structures, land improvements, and landscaping, and which would allow mining because of the low economic value of the land and its improvements.

Examples of such uses include:

Very low density residential (For example: 1 unit per 10 acres)
Extensive industrial
Recreation (public/commercial)
Agriculture
Silviculture
Grazing
Open space

Interim - Land uses which require structures, land improvements, and landscaping of a limited useful life and from an economic and political standpoint can be converted to mining at the end of that limited life. The period of interim use should be compatible with the orderly and timely production of mineral resources and the useful life of the improvements.

Buffer - Land uses which provide sufficient distance and/or barriers between mining and incompatible land uses, to mitigate noise, dust, vibration, and visual impacts of mining, and to protect public safety."

1.4.1.2 Aggregate Supply and Consumption

The mineral resources addressed first by the SMARA are sand, gravel, and crushed rock (aggregate). As referenced earlier, the SMARA does not distinguish between types of mineral resources. Therefore, to implement the SMARA, priorities had to be established as to which mineral resources should be addressed first. This was done by the State Mining and Geology Board which gave priority to construction related materials and particularly those used for Portland Cement Concrete (PCC). The reason for this is the vital role that construction grade aggregate (sand, gravel, and crushed rock) plays in the economy. PCC grade aggregate is emphasized because it is required for 60% of all aggregate used, and is the scarcest of the aggregate materials.

The discussion that follows attempts to identify projected demand for the next 50 years and the location and amount of aggregate supplies available. The information presented is based entirely on data from the State which the County assumes is valid. Special Report 145 of the California Division of Mines and Geology (Mineral Land Classification of Ventura County, 1981) was specifically relied upon.

(1) Production Consumption Regions (PCR)

The cost of hauling aggregate products to market is a significant portion of its total production cost. Because of this, areas containing aggregate deposits which are near centers of consumption become the areas from which the aggregate is produced. Consequently, regions can be identified which encompass the supply and demand of a given locale. The State refers to such regions as "Production Consumption Regions" (PCR). There are two PCRs that cover the populated south half of the County. The north half of the County, generally within the National Forest, was not surveyed by the State. The "Simi PCR" includes the southeast quadrant of the County and portions of Los Angeles County (Malibu and Chatsworth/Canoga Park). The "Western Ventura County PCR" includes the entire Santa Clara River Valley and the remaining western portion of the County's south half (Figure 1.4.1).

(2) Projected Demand

The State's studies indicate that demand can vary significantly between PCRs. The State found that the annual per capita consumption

in the Simi PCR was 5.5 tons, whereas the annual per capita consumption rate in the Western Ventura County PCR was 11.0 tons. These figures were arrived at by comparing the annual aggregate production for each PCR with its annual population between 1960 and 1978. It was assumed that all the aggregate produced within a PCR was consumed there as well. Further study by the State revealed that long-term per capita consumption patterns, coupled with future population projections, was the best way of predicting future demand.

Based upon population projections developed by the County, the Southern California Association of Governments (SCAG), and the State Department of Finance, the Simi PCR is anticipated to have a population of over 600,000 by the year 2030. The Western Ventura County PCR population is expected to exceed 700,000. Applying the annual per capital consumption figures cited above, the total aggregate demand within the Simi PCR will reach 130 million tons by the year 2030. Within the Western Ventura County PCR demand will reach 310 million tons by the year 2030 (see Figure 1.4.2).

Projections such as these are very gross measures of demand and have an inherent degree of uncertainty. Recessions and construction slow downs certainly reduce demand, however, a major disaster (e.g. earthquake) could boost demand considerably. Trying to incorporate such circumstances into a 50 year demand projection is virtually impossible and, therefore, the long term demand projections should be considered general at best.

(3) Location and Classification of Aggregate

The aggregate resources for the respective PCRs are located in very different geographic settings. The aggregate resources in the Western Ventura County PCR are almost exclusively located in, and adjacent to, the Santa Clara River. The aggregate resources in the Simi PCR are located in the hills northwest of Moorpark and in the hills to the north and south of Simi Valley. The accompanying map depicts the location of the resources (see Figure 1.4.1).

The County's aggregate resources are classified as one of several different **mineral resource zone** categories **(MRZ-1, MRZ-2, MRZ-3, MRZ-3(a) and MRZ-4)**. These classifications are generally based upon the relative knowledge concerning the resource's presence and the quality of the material. The State-adopted definitions of each classification follows:

MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone shall be applied where well developed lines of reasoning, based upon economic, geologic principles and adequate data demonstrate that the likelihood for occurrence of significant mineral deposits is nil or slight.

MRZ-2: Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists. This zone shall be applied to known mineral deposits or where well developed lines of reasoning, based upon economic, geologic principles and adequate data demonstrate that the likelihood for occurrence of significant mineral deposits is high.

MRZ-3: Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

MRZ-3(a): Areas, judged on the basis of the limited available geologic data and field work, to have higher potential as sources of aggregate material suitable for Portland Cement Concrete than other deposits classified MRZ-3.

MRZ-4: Areas where available information is inadequate for assignment to any other MRZ zone.

A review of Figure 1.4.1 reveals that there is relatively little land within the County which is known to have significant deposits of construction grade aggregate (those classified as MRZ-2). MRZ-2 areas have been "designated" by the State as areas that should be subject to special management regulations through the General Plan of local jurisdictions.

While the areas designated MRZ-2 represent the State's best guess as to where aggregate resources are located, these conclusions were based upon proprietary industry data, historic well logs and borings, and general knowledge about aggregate bearing formations. No original field research was conducted to specifically assess the quantity or quality of the resource.

(4) Estimates of Aggregate Resources

Given the limitations on data, the State nevertheless prepared estimates of aggregate reserves in order to project the availability of aggregate supplies for the next 50 years. The MRZ-2 areas designated by the State are the basis for such estimates. Areas classified MRZ-3 and MRZ-3(a) are not considered because of the highly speculative nature of viable aggregate deposits. Areas classified as MRZ-1 and MRZ-4 are likewise excluded from consideration.

In estimating the amount of resources in the various MRZ-2 areas, the following general criteria are used:

- The deposit must consist of sound, durable material substantially free of chemically reactive substances that would preclude its use as Portland Cement Concrete (PCC) aggregate.
- The basic geologic aspects of the deposit must be understood clearly enough to permit interpretation of the lateral and vertical distribution of the material.
- It is assumed that there is an average of 0.07 short tons of aggregate per cubic foot of material.

In addition to the preceding general criteria, specific assumptions were applied to sub-areas ("sectors") of the MRZ-2 designated areas. The Simi PCR includes three sectors (A, B and C), while the Western Ventura County PCR has ten sectors (A through J). The specific assumptions made relative to each sector are found in Special Report 145. Some of the criteria considered were the amount of waste material (such as silt and clay) associated with the aggregate, how much "reactive" material is present (gypsum, zeolite, chert, etc.), depth of the deposit and access to it.

Figures 1.4.3 and 1.4.4 summarize the "inferred" aggregate "reserves" and "resources" in Simi and Western Ventura County PCRs respectively. The term "inferred" is taken from the U.S. Geological Survey classification system and means:

> Reserves or resources for which quantitative estimates are based largely on broad knowledge of the geologic character of the deposit and for which there are few, if any, samples or measurements. The estimates are based on an assumed continuity or repetition, of which there is geologic evidence; this evidence may include comparison with deposits of similar type. Bodies that are completely concealed may be

included if there is specific geologic evidence of their presence. Estimates of inferred reserves or resources should include a statement of the specific limits within which the inferred material may lie.

The State describes "reserves" as follows:

> Reserves represent material believed to be acceptable for commercial use that exists within property boundaries owned or leased by an aggregate producing company and for which permission allowing extraction and processing has been granted by the proper authorities.

The State describes "resources" as follows:

> Resources include reserves as well as all potentially useable aggregate materials (non-permitted resources) which may be mined in the future, but for which no use permit allowing extraction has been granted, or for which development has not been definitely established to be feasible based upon current technological or economic conditions.

A quick comparison of the total demand for each of the County's PCRs (Figure 1.4.2) with the supply available in each PCR (Figures 1.4.3 and 1.4.4) reveals an apparent abundance of aggregate and no shortfalls for 50 years of demand. Detailed assessments of supply and demand within the two PCRs are made in subsequent sections.

(5) General Limitations on the Supply of Aggregate

The preceding section discussed the general availability of aggregate to meet projected consumption through the year 2030. It did not, however, discuss circumstances which could create shortfalls of aggregate. These are discussed below and in more detail as a part of the discussions about the two PCRs:

Quality of Base Data - As discussed earlier, the estimates of reserves and resources are based upon general indications of the resources' presence. Specific and detailed samplings were not taken to determine the aggregates' presence. Therefore, the overall basis for the estimate could be inaccurate (even though it is the best available).

Incorrect Assumptions - When making estimates regarding the volume of material available, assumptions had to be made regarding its quality, percentage of waste material present, depth, accessibility, etc. The application of these assumptions to large areas based on limited knowledge can lead to incorrect estimates of "reserves" and "resources".

Demands from other PCRs - While the estimates of supply and consumption within a given PCR may suggest that a shortfall condition will not arise over the next 50 years, such estimates fail to evaluate the possibility of shortfalls in adjoining PCRs which could trigger increased demand on the supplies of neighboring PCRs. This situation does not limit the estimated supply of aggregate in either of the County's two PCRs, but it does increase the demand for the same supplies which can just as easily create shortfall conditions.

Permission to Mine - While the State was able to generally identify the probable location of viable deposits of aggregate, it cannot guarantee that the deposits will be mined; this is the perogative of the surface owner and local jurisdictions. Presumably a landowner would find it economically advantageous to allow mining on his

property and open it up for such purposes. This may not always be the case. For a variety of reasons, a landowner may not wish to have his land mined.

Local Government Permit Restrictions - While Ventura County has denied only one project in recent years, it has imposed rather stringent conditions on the mining operations that have been approved. The conditions relating to the potential volume of material to be mined are often based on protection of water resources, preservation of wildlife habitat, reclamation, and aesthetics. Conditions addressing such issues will vary from site to site, and between city and County jurisdictions, but could significantly reduce the amount of aggregate available.

Imbalanced Distribution of Aggregate Grades - As indicated in previous sections, distinctions are made between aggregate in general and aggregate suitable for PCC. Another factor that determines the supply of PCC quality aggregate is the mix of fine and coarse grades of material. PCC requires a 50/50 mix of the two grades of material. Therefore, while a given deposit may contain large volumes of aggregate of proper quality, it may not be in the correct proportions. In such cases, the actual supply of PCC aggregate from that deposit would be a function of the lesser quantity of a given grade of aggregate. For example, a deposit of 50 million tons of PCC quality aggregate may consist of 40 million tons of coarse material and 10 million tons of fine material. Given the 50/50 mix requirement, there would only be 20 million tons of PCC aggregate available (10 of fine and 10 of coarse). Such imbalances can be overcome by hauling in the necessary grade of aggregate.

Hauling Impacts - As mentioned previously, the unequal distribution of fine and coarse material for PCC may necessitate the transport of material between sites in order to achieve an optimal supply of PCC quality aggregate. Transporting the material raises costs. It also contributes to traffic impacts, particularly if surface streets must be used. Energy consumption rises and with it air pollution. Finally, new or relocated processing facilities may have to be established, again at considerable costs and perhaps over citizen opposition. Given the impacts listed above, the redistribution of aggregate grades may be impossible. Should this occur, the optimal supply of PCC quality aggregate could not be realized, thereby effectively limiting the total supplies of such aggregate.

Changes In Consumption Patterns - The total volumes of aggregate projected to be consumed through the year 2030 were based on per capita consumption rates derived from consumption rates of the 60's and 70's. Should circumstances change (such as reconstruction from a major earthquake) consumption could rise significantly. Also, if projected population figures are exceeded total consumption will rise (even though the per capita rate might remain unchanged). Such changes in consumption patterns would not limit the availability of the resources identified, but they would place unexpected demands on the resource and possibly create shortfall conditions.

(6) Simi Production Consumption Region (PCR)

This section will discuss in detail the issues that pertain to the Simi PCR as depicted on Figure 1.4.1.

- Assessment of Supply and Projected Consumption - In general terms, the supply of aggregate within the Simi PCR is sufficient to meet the region's projected 50 year demand. Table 1.4.2 indicates the total aggregate demand to be 130 million tons of which 60%, or 80 million tons, will be for Portland Cement Concrete(PCC). Figure 1.4.3 indicates there are total aggregate "reserves" and "resources" of 1200 million tons, of which 760 million tons are cumulatively suitable for PCC. No apparent

shortfall exists. However, a detailed review of the resources in each of the three sectors in the PCR reveals that available resources may be less than initially estimated.

Sector A (which consists of existing mining operations) has total aggregate supplies of 180 million tons to meet a projected need for 130 million tons. When evaluating the supply of PCC suitable aggregate, it appears there are 130 million tons available to meet an 80 million ton demand. However, the relative proportions of fine and coarse material available as "reserves" in the sector actually limit the available PCC aggregate to 100 million tons. Therefore, while there is no shortfall of PCC aggregate, the excess supply is considerably less than it first appears.

The imbalanced distribution of coarse and fine materials in sector A is indicative of a general problem within the Simi PCR. A review of Figure 1.4.3 reveals unequal distributions of coarse and fine grades of aggregate in sectors B and C which would necessitate the transport of coarse and fine materials between sectors to achieve an optimal supply of PCC quality aggregate. The availability of PCC quality aggregate in each sector and under optimal distribution conditions are summarized on Figure 1.4.5. This table is derived from Figure 1.4.3 and illustrates that there are limited supplies of PCC grade aggregate in each sector and that only by combining the aggregate from the different sectors can there be significant supplies of PCC grade aggregate in the necessary 50/50 proportions.

In summary, the Simi PCR contains adequate supplies of aggregate to meet its projected needs to the year 2030 and significantly more material is available from areas not currently under permit. However, the optimal use of the available resources will require transport between sectors.

- Specific Limitations on Aggregate Supply - General limitations on aggregate supplies were discussed earlier; the following are some of the specific limitations that are thought to exist in the Simi PCR.

  Brandeis Institute - This religious institute controls the majority of Sector B and because of the nature of the use, mining may be considered inappropriate on the Institute's land. Lack of access to the resources in this sector could reduce the cumulative supply of aggregate by 510 million tons and the cumulative supply of PCC quality aggregate by 400 million tons.

  Hauling Aggregate - With the imbalance of aggregate grades in the Simi PCR, transporting the material for optimal mixes may become a necessity at some time. Because the present mining and processing facilities are located in the hills to the north and south of the City of Simi Valley, any transport of material between sites will invariably have to pass through the City. The movement of trucks for this purpose may create problems in the area. Any curtailment of the transport of material would effectively reduce the supply of PCC aggregate in the Simi PCR.

  Shortfalls in Adjoining PCRs - The State estimated that the "reserves" within the San Fernando and Western Ventura County PCRs will be depleted within 10 and 13 years respectively if present consumption rates continue. Since the Simi PCR is adjacent to both of these PCRs, it is logical that its supplies of aggregate would be utilized to meet shortfalls in adjoining PCRs. If "resources" within the San Fernando and Western

Ventura County PCRs are opened up for mining, the shortfalls projected by the State will be put off and less demand will be placed on the Simi PCR.

Aesthetics - Given the location of the aggregate deposits in the hills surrounding the City of Simi Valley and the City's strict controls on development on the hillsides which could detract from aesthetic qualities, some mining may be precluded.

Other Constraints - Preservation of rare and endangered species and archaeological sites may further limit the extent of mining in the various sectors.

- o Alternative Sources of Aggregate - If shortfalls should arise in the Simi PCR, what alternative sources could be utilized?

  Saugus Newhall PCR - This area has not been thoroughly evaluated by the State at this time, but preliminary assessments indicate the presence of substantial supplies of aggregate. The problem, however, would be the costs of hauling aggregate over such long distances and the attendant impacts from its transport.

  Specific studies will have to be made of such potential alternative sources to determine their suitability and to assess the attendant problems that would be associated with mining sites in potentially distant locations.

- o Findings and Implications

  - Theoretically, there are adequate supplies of aggregate in the areas presently being mined (Sector A) to meet the total and PCC aggregate demand to year 2030.

  - Sectors B and C collectively contain large volumes of aggregate material, but individually the sectors do not contain favorable balances of coarse and fine material grades for PCC. The aggregate grades from Sectors B and C would have to be combined to provide a complementary supply of material grades for PCC. Combining the materials will require their transport which could result in traffic impacts on the City of Simi Valley.

  - Adjoining Production-Consumption Regions (PCRs) are predicted to experience shortfalls of aggregate supply and will rely on the Simi PCR for material. Increased demands on the Simi PCR from adjoining PCRs could create shortfalls within the Simi PCR of aggregate, particularly of PCC quality.

  - A substantial portion of Sector B is located on lands controlled by the Brandeis Institute (a nonprofit religious institute) and may therefore have limited potential for mining. This would substantially reduce the total supply of coarse material in the Simi PCR and therefore the total amount of aggregate suitable for PCC.

(7) Western Ventura County Production Comsumption Region (PCR)

This section will discuss in detail the issues that pertain to the Western Ventura County PCR as depicted on Figure 1.4.1.

- o Assessment of Supply and Projected Consumption - Figure 1.4.4 summarizes the estimated aggregate supplies in the Western Ventura County (WVC) PCR. Several estimates are provided based upon varying depths to which mining might occur. The total supply of aggregate is 4860 million tons. However, of the land under permit ("reserves"), the actual amount of aggregate

estimated to be currently available is only 40 million tons. Of the 40 million tons, only 30 million tons are suitable for PCC. Since the State conducted its study, the County has granted four permits for additional mining operations. The County estimates that these operations can supply up to an additional 15 million tons of aggregate over the 30 year life of the permits. Another permit was issued to the S.P. Milling Co. by the City of Santa Paula which would add to the original State estimate of reserves. At the current rate of consumption, the State estimates that the identified "reserves" within the Western Ventura County PCR (less the 4 CUPs and S.P. Milling) will be depleted within 13 years.

By reviewing Figure 1.4.4 and comparing the State's estimate of total aggregate supply in the three sectors where mining is presently underway (A, B, and E - 970 million tons) with what is considered to be the total allowed for extraction under County permits in these three sectors (40 million tons) reveals that roughly 4.1% of the total deposits in the three sectors is actually available for extraction. Applying this percentage to the river's total deposit of 4860 million tons, yields 200 million tons being potentially available given the same level of mining restrictions applied to the entire length of the Santa Clara River.

Because the 4.1% availability factor was derived from heavily mined areas, the mining restrictions imposed in those stretches of the river are probably more stringent than would be the restrictions on mining operations in other sectors of the river. Therefore, the 4.1% available factor is probably conservative.

Contrasting the foregoing estimates of supplies with the consumption projections summarized on Figure 1.4.2 reveals significant shortfalls of aggregate; 310 million tons of demand versus an estimated 200 million tons available. To what degree the demand for PCC quality aggregate (190 million tons) could be met is uncertain. However, if we apply the previously used 4.1% availability factor to the State's estimate of total PCC quality aggregate (3980 million tons), we arrive at a rough estimate of potential supply, 163 million tons. This would approach the projected demand of 190 million tons, but nevertheless fall short by nearly 30 million tons.

In summary, there are projected shortfalls of aggregate if the total 50 year demand is contrasted with the supply of material available from existing mining operations. Such a conclusion does not take into account the possibility of mining operations moving further upstream into areas where additional aggregate resources are located. Given past experience, however, necessary restrictions on river excavations will significantly limit the total amount of aggregate that can be removed. The possibility of shortfalls is still probable, but should be much less severe than initially projected.

- Specific Limitation on Aggregate Supply - Like the Simi PCR, the Western Ventura County PCR has some specific circumstances and issues that could reduce the estimated supply of aggregate. Among them are the following:

  Encroaching Urbanization - As of 1983, there has been relatively little urbanization along the length of the Santa Clara River and, therefore, limited citizen opposition to mining operations in the river. This situation, however, has been changing over the past several years as homes have been built in Ventura on the bluffs overlooking the river in the vicinity of the S.P. Milling and Conrock operations in El Rio and Saticoy. A

proposed expansion of S.P. Milling's operations in the river received strong opposition from the new neighbors in 1980 and contributed to the applicant's withdrawal of the proposal.

Urban expansion along the river in the Ventura-Oxnard areas is a problem now and will likely worsen as more residences are built which overlook mining operations. This same situation can (and probably will) be repeated up river in the cities of Santa Paula and Fillmore over the next 50 years. Therefore, public opposition to new mining will likely increase.

Multiple Jurisdictions - If the river were solely within the County's jurisdiction, a unified and consistent set of management policies might be developed which could focus on the resource's regional importance. However, the city limits of Santa Paula and Fillmore already extend across the river. The city limits of Oxnard and Ventura might intrude into the river in the future as well. Therefore, the managed use of the river's total aggregate resources are presently, and will continue to be, in the hands of multiple jurisdictions with potentially different priorities for their use.

More Restrictive Mining Regulations - The mining restrictions (Conditional Use Permit conditions) on operations in the river have been necessary to safeguard natural (and man-made) resources associated with the river. Since the original restrictions were applied, studies have been undertaken to more fully assess river dynamics. The results of these studies and future ones could suggest that in-river mining restrictions be tightened.

One reason for tighter mining restrictions is the County's growing need to very carefully manage its limited supply of water which is supplied in part by the Santa Clara River. To the extent that the management policies of water and mineral resources conflict is a measure of the restrictions that may be imposed. Should this occur, there would almost certainly be a functional reduction in potential supplies of aggregate.

Competition from Agricultural Uses - Just as there are resources within the river (such as water) which compete with aggregate extraction, so are there also competing uses outside of the river. These often consist of irrigated row crops and orchards. Unlike the grazing land in the Simi PCR, the agriculture that competes with aggregate resources in the WVC PCR consists of highly productive cash crops. Since agriculture is a very important use within the County, it may be difficult to displace such uses in favor of mining uses.

o Alternative Sources of Aggregate - Beyond the resources cited as being available, there are other potential sources which are listed below:

Simi PCR - This source, as discussed earlier, has surplus capacity beyond the projected demand within its own region. Given its proximity, it would be a likely alternative source although increased transportation costs and impacts would result.

Saugus Newhall PCR - This region abuts the eastern end of the Western Ventura County PCR and is considered to have large supplies of aggregate. Transport of material to the WVC PCR could be more costly than bringing material in from the Simi PCR.

Storm Flows - The State estimates of aggregate resources within the Santa Clara River were based upon the amount of material in

the river presently and did not consider the possible replenishment of aggregate which is constantly being washed downstream. One reason for this is that there is very limited data on possible replenishment rates. Secondly, only major storm flows bring down any significant amounts of material and these are not very predictable.

MRZ-3 Areas - There are large areas outside the river which the State has identified as having potential aggregate value. Their exact value must await further study. Regardless of their potential value, some MRZ-3 lands (such as those in the Santa Monica National Recreation area) will probably not be available for mining.

Deeper Excavation in River - Previous discussions indicated that mining restrictions (basically depth and width) had effectively limited the available aggregate resources within the Santa Clara River. The imposition of these restrictions could be lifted at some point if it were discovered they were unnecessary or their removal was acceptable in light of the cost of having to import aggregate.

o Findings and Implications

- Of the two PCRs in the County, the Western Ventura County PCR has by far the greater demand and probable shortfall. The potential aggregate resources are great (5000 million tons); however, actual "reserves" (resources under permit) are only 40 million tons. An extrapolated total supply of aggregate resources based upon probable in-river mining restrictions might yield 200 million tons. This represents a prospective shortfall of 110 million tons by the year 2030.

- There are significant environmental problems associated with mining in the river and these are heightened as the depths of excavation increase.

- The permitted "reserves" are expected to be depleted prior to the year 2030 which will necessitate the issuance of additional mining permits either in, or outside of, the river if demand is to be met from supplies within the PCR.

- Unlike the Simi PCR, the sources of aggregate from the Santa Clara River often lie within the city limits of various cities or within city Spheres of Influence and Planning areas. This means there will likely be competing views on how aggregate resources should be managed.

- As aggregate supplies are depleted in the lower reaches of the Santa Clara River, mining operations will be forced to move further upstream. This means increasing the distance from the consumers who are located primarily on the Oxnard Plain. This anticipated relocation of mining operations may also require the relocation of existing processing plants which are now situated in the El Rio/Saticoy area.

- The effects of moving upstream will be increased costs of operation, and additional impacts from the transport of material.

1.4.1.3 Competing and Conflicting Land Uses

The previous section discussed issues of supply and demand within the County's two Production Consumption Regions (PCRs), as well as factors which affect the theoretical projections of supply and demand. Some of

these were related to conflicts with various land uses. This section will examine in further detail the specific land use factors which could influence the supply of aggregate resources. In so doing, this section will illustrate the problems of retaining access to, and mining of, mineral resources in the face of encroaching urbanization.

The discussion that follows is general in nature. The focus is on those areas of the County which the State has designated as having significant deposits of mineral resources. The discussion of conflicting and competing land uses is divided into four categories.

(1) Existing Structures and Land Uses

The existence of structures and land uses presents the greatest potential conflicts with mineral resources. Their presence over, or in close proximity to, a mineral resource may preclude or hinder the extraction of the resource. The uses and structures that are most likely to have this effect are those which entail a fairly significant investment or which involve the presence of people. The paragraphs that follow will describe the subcategories of structures and uses that pose probable conflicts with mineral deposits.

- Existing Uses of Land - This subcategory has four broad classes: existing mining CUPs, undeveloped sensitive, developed non-sensitive, and developed sensitive.

  Developed, sensitive uses include significant structures and improvements, and are generally adversely affected by mining operations in close proximity. Like other "developed" uses, mining would be virtually precluded on the site where the use is located.

  The types of uses included in this class are residential, commercial, and institutional uses, and water spreading grounds. Given the fact that development of these types of uses has been concentrated in and around urban centers, conflicts between these sorts of uses and mineral deposits will be limited. They exist in the El Rio and Saticoy areas near the Santa Clara River and along the major access routes to the resource deposits in the Simi Valley area.

  Developed, non-sensitive uses is a broad class that is meant to identify uses which would likely preclude mining beneath the use itself, but which would generally be unaffected by mining operations in close proximity to them. Among the uses that fall into this category are heavy industrial uses, oilfields, landfills, and cemeteries. Of the uses listed, oilfields (as described by the State Division of Oil and Gas) cover the largest area, but they are the least densely developed. Despite this, the network of roads and pipelines leading to the relatively few oil wells and tank facilities could significantly limit access to mineral deposits.

  Undeveloped, sensitive land uses are generally devoid of structures and improvements, but are devoted to activities which utilize the land in a manner which precludes or hinders mining operations. Parks and irrigated agricultural lands are prime examples. Parks are depicted in Figures 4.10.2 & 3 of the Public Facilities and Services Appendix. Agricultural lands are depicted in Figure 1.6.1.

  While these areas appear to be available for future mining due to the general absence of improvements, existing County policies, plans and laws limit, in some degree, the use of the land for mining purposes. Irrigated agricultural lands under a Land Conservation Act (LCA) Contract are a specific case in point.

Existing mining CUPs (Figure 1.4.6) are listed here and appear on the accompanying maps to identify their locations and to suggest that resource areas already under permit do not represent new, untapped sources of aggregate to meet future demand. Two CUPs are on file for the north half of the County; the Schmidt Quarry above Ojai and Ridgelite in Lockwood Valley.

- Structures - This subcategory includes levees, bridges, pipelines, the proposed Vern Freeman Diversion Structure, and other structures whose presence can preclude or seriously hinder river mining operations. They are costly, necessary public facilities which frequently cannot be relocated. The presence of such structures in and along the Santa Clara River has, and will continue to, limit access to mineral resources located there. This is because mining in the river can alter the river's behavior and lead to the destruction of the structures by the river. The presence of these same structures outside of a river does not conflict to the same degree with mining operations because the structures can be more easily protected from adverse mining impacts.

  The presence of the above described structures will have a disproportionate effect on the Western Ventura County PCR because the region relies almost exclusively on aggregate from the Santa Clara River. The Simi PCR receives virtually all of its aggregate from landward locations which are generally free of structures which cannot be accommodated in the mining process.

(2) Land Use Plans and Policies

This category of land use issues does not represent the obvious land use conflicts exemplified by existing uses and structures, but they include latent conflicts that must be recognized. As intangible as plans and policies are, they often represent substantial financial commitments for services and infrastructure that cannot be reversed. A discussion of the type of plans and policies that affect mineral resources follows:

Policies are often general in nature (and therefore hard to map), but they can, nevertheless, play a significant role in how development occurs and where mining can take place. Policies establishing **greenbelts** have been adopted primarily to preserve farming, not foster mining. These apply particularly to the areas along the Santa Clara River. Likewise, policies limiting grading and development on steep slopes can effectively preclude mining in some areas. Simi Valley, in conjunction with the County, has such policies to protect the view of the hills from the City. Ventura has similar policies. The City of Oxnard has a specific policy against mining east of Vineyard Avenue. The County has numerous policies relating to water preservation and reclamation programs, and facililites which could affect mineral resources. Among these are the Vern Freeman Diversion Structure and the Pumping Trough Pipeline.

Land use plans, unlike policies, adopted plans can be easily mapped (see Land Use Chapter). The land use designations of the applicable County and city plans were reviewed to determine which designations had the potential to preclude mining if development occurred and of these which are likely to be sensitive to mining operations in the vicinity.

"Rural" designated areas of the County, where residential uses are planned for, and "Urban" designated areas generally include "sensitive" land uses. The exception would be areas planned for heavy industrial uses which are not generally adversely affected by neighboring mining operations.

(3) Jurisdictional Interests

The discussion of potential land uses conflicts has thus far focused on existing and planned uses. An overriding land use consideration, however, is what jurisdiction has land use authority in a given area (see Land Use Chapter).

The County has limited land use control over State and Federally owned lands. The County's land use authority vis-a-vis the various cities is much more fluid. The County obviously has no land use control within incorporated cities. Immediately outside the city limits the County has control; however, through various policy decisions and understandings, the County has promised to recognize the cities' interests and plans where they extend into unincorporated territory.

(4) Environmental Constraints

There are numerous environmental factors that can bear on the development of mineral resources. Frequently, conflicts with these factors can be mitigated through the permit process. As such, it is difficult to identify and map factors which could be considered an unmitigable impediment to mining.

Those that were identified include aquifer recharge areas, critical habitat, and the existing limitations on mining in the Santa Clara River (for habitat maps, see Sec. 1.5; for aquifer recharge maps, see Sec. 1.3). This is not an exhaustive list because environmental factors are usually site specific and not applicable on a Countywide basis. Therefore, there may be unique factors in a given mineral resource area that would not be identified until development of the resource was actually proposed.

As an example of the range of factors that can affect mining in an area, the following is a list of some of the factors associated with in-river mining operations:

- possible damage to facilities and structures,
- high groundwater,
- shortened excavation periods,
- exposure and evaporation of groundwater,
- need for frequent surveying,
- disruption of riparian habitat,
- disruption of fisheries, and
- interruption of sediment transport.

(5) Findings and Implications

- o The location of existing and proposed structures and land uses can preclude or hinder the extraction of mineral resources.

- o A land use or structure does not have to directly overlay a mineral resource to hamper its extraction.

- o The aggregate supplies for the Western Ventura County PCR appear to be subject to greater existing and potential land use conflicts than do the aggregate resources in the Simi PCR.

- o The Resource Protection Map (of the General Plan) should identify recognized Mineral Resource Areas.

- o A Mineral Resource Protection Overlay Zone should be applied to Mineral Resource Areas identified in the General Plan and should be employed to:

- Safeguard future access to an important resource.
- Facilitate a long term supply of aggregate within the County.
- Minimize land use conflicts.
- Provide notice to landowners and the general public of the presence of the resource.

1.4.2 PETROLEUM RESOURCES

Petroleum resources play a significant role in the local and regional economy. In terms of gross dollars, petroleum production accounts for approximately 75% of the total mineral production of Ventura County. Ventura County produced 15,659,398 barrels of oil and 16,130,168 thousand cubic feet of natural gas in 1987 (excluding Outer Continental Shelf [OCS] production), which ranks third in State petroleum production. Figure 1.4.7 identifies known petroleum resources in the County. The petroleum resource areas are derived from maps prepared by the State Division of Oil and Gas. As new wells are drilled outside of known fields, the fields' boundaries are realigned to incorporate the newly found resources. Substantial petroleum production occurs offshore of Ventura County as well. Production within three miles of the coast is under the jurisdiction of the State while that beyond three miles is under Federal jurisdiction.

1.4.2.1 Geologic History

Oil deposits recovered today are a result of various geologic forces that occurred over millions of years. Current theory is that parts of California consist of ancient sea floors that once covered sections of Western North America. Oil and gas fields are the result of the accumulation of layer upon layer of decayed organic material that was successively covered by layers of sediment in the ocean basins and shallow seas of what would later become California (Mintier, 1988).

The accumulated sediments were compacted and heated by the weight of overlying layers of sediment and gradually hardened into shale and sandstone. When oil and gas reach a rock bed that is impermeable, they collect between the rock grains and faults in the earth and form a reservoir. A typical oil and gas reservoir in California is composed of sandstone because sandstone is very porous and is easily permeated by oil which collects in the small spaces between the sand grains.

The rock formations that trap oil have been brought closer to the earth's surface by the action of tectonic forces in the earth's crust. These actions caused the original rock strata to reshift, fold, buckle and fault, forming uplifted geologic structures known as anticlines (Department of Oil and Gas, 1983). Figure 1.4.8 illustrates an anticline and the typical relationship between oil, gas, and water within these formations. The oil cannot escape upward because of the impervious shale bed above the oil sandstone and it cannot travel downward because the water beneath it weighs more than the oil. Most of the petroleum resources located in Ventura County are within anticline formations.

1.4.2.2 History of Oil Development in Ventura County

Drawn to Ventura County by reports of "oil struggling to the surface at every available point," George Shoobridge Gilbert, referred to as California's first true petroleum pioneer, began extraction operations at Sulphur Mountain in 1861 (Triem, 1985). Most of the early unrefined oil found in Ventura County was a thick, sticky substance called asphaltum. Originally, asphaltum was used to surface roads and seal roofs on houses, yet early oilmen like Gilbert began looking for a way to process this material and the good quality, light gravity oil also found in Ventura County, into a more marketable product. In 1854, oil collected at Sulphur

Mountain was refined in home-made stills. The first commercial oil refinery in the county was built in 1861 by Gilbert. It was located in the Ojai Valley and produced between 300 and 400 gallons of refined oil a week (DOG, 1983).

By the 1880's almost all of the State's oil production was in Ventura County, as the discoveries at Sulphur Mountain, Rancho Ojai, Rancho Sespe, and Rancho Santa Paula became known (DOG, 1983). The most successful early well, discovered in 1865, was "Ojai 6", which is considered to be the first oil well in California to produce commercially (Triem, 1985). The State's first oil "gusher" occurred in Adams Canyon near Santa Paula in 1888 and was the first big well in California, flowing at an estimated 1500 barrels of oil a day.

As the nation's demand for oil grew, Ventura County continued to be a major oil producer. The South Mountain and Ventura oil fields were discovered in the early 1900's. By this time, oil was rapidly replacing coal as a fuel for locomotives, ships, and homes (Mintier, 1988). In 1914, gasoline outsold kerosene for the first time, due largely to the increasing popularity of the automobile. The introduction of the Model T Ford in the 1920's led to an even higher demand for oil (Mintier, 1988).

Ventura County experienced tremendous population growth during the 1920's due primarily to the discovery of the Ventura Avenue Oil Field in 1916. By 1926, this field was producing over 20,000 barrels of oil a day and its level of productivity brought in thousands of oilworkers, geologists, engineers, and oil-related businesses to the City of Ventura and outlying areas (Triem, 1985).

During the same periods, the town of Santa Paula underwent significant changes with the discovery of the South Mountain Oil Field in 1916 (Triem, 1985). Up until then, agriculture was the only large industry in Santa Paula, but the discovery of oil at South Mountain created an oil boom period which lasted for approximately ten years.

Oil production and exploration practically came to a halt during the 1930's Depression years. Subsequently, World War II brought a resurgence of national oil production, which continued sporadically throughout the 1950's. New oil discoveries in California were limited to smaller fields and to the development of extensions of field boundaries or deeper drilling in existing fields (DOG, 1983).

No large onshore fields have been discovered in Ventura County since the Saticoy Field in 1955 (DOG, 1988). In the 1960's, the first serious exploration of submerged lands was undertaken, which led to the discovery of two large oil fields off the coast of Santa Barbara County (DOG, 1983). Subsequently, Ventura County oil exploration efforts were then concentrated on offshore fields and operators began to explore new, more efficient methods of oil production.

1.4.2.3 Traditional Oil Recovery Methods

There are several methods available for recovering oil. When a field is first discovered, primary recovery techniques are usually sufficient. During the primary stages of oil recovery, the reservoir's natural pressure is high enough to move the oil to the surface. However, in California, only about five to thirty per cent of oil reserves can be recovered in this way (American Petroleum Institute, 1983). The process of pumping oil, another primary recovery method, is the next stage in oil production. As the oil leaves a reservoir, the natural pressure of the reservoir decreases, thus slowing down the production process. An artificial pumping mechanism is then needed in order to recover the oil at a rate fast enough to make production economically feasible for the operator.

While pumping is sufficient in extracting most of the oil in Ventura County, some of the oil reserves, known as "heavy oil," were not recovered

using standard pumping operations. Because of the considerable energy required to recover heavy oil, and the difficulty in refining it into useful products, recovery of this resource was not considered feasible until the increase in oil prices brought on by the 1973 Arab oil embargo (API, 1983). At that time, operators began to explore alternative methods to recover the heavier crudes and to recover the lighter crudes in a more efficient manner (see below).

1.4.2.4 Enhanced Oil Recovery Methods

Enhanced oil recovery (EOR) methods add energy in the form of pressure, heat and chemicals to overcome the natural forces that impede oil production (DOG, 1983). In Ventura County, the most common EOR method used is waterflooding which involves injecting water into an oil reservoir through injection wells, which then increases or maintains reservoir pressure (DOG, 1983). As illustrated in Figure 1.4.9, water is often pumped out of a field with oil and gas. In some of the older fields, close to 90 per cent of the recovered fluids are "produced water." Some operators are using this produced water for reinjection into their fields in waterflooding operations.

Another popular EOR method used in California is steam injection. Steam is injected on either a continuous (flood) or an intermittent (cyclical) basis. Cyclical stimulation is carried out by injecting steam into a producing well for a short period of time. After each steam cycle, the well is returned to production. Continuous steam injection, also known as steam flooding, is carried out by adding steam into a reservoir through injection wells while at the same time producing oil from other, nearby wells (API, 1983).

These methods work well in the recovery of heavy oil because the heat from the steam lowers the viscosity of the heavy crude, thereby improving its flow characteristics. Currently in Ventura County, cyclic steam injection is practiced in the Oxnard Plain. Wells are injected with steam for approximately one week and then shut down. A few days later, production begins and continues until the flow of oil drops to an unacceptable level, and the process is then repeated.

1.4.2.5 Supply and Demand

In 1987, 15,659,398 barrels of oil were produced in Ventura County's 39 onshore fields. An estimate of the remaining oil reserves in Ventura County is 246.141 million barrels as shown on Figure 1.4.9. This estimate has been calculated by DOG and is determined by subtracting each years' production figure from an estimate of the total oil reserves available in each field. Estimating the length of time it will take to deplete these reserves is a much more difficult task.

The price of petroleum products has a direct impact on the rate at which oil/gas reserves are extracted. If the price of crude is low, then the operator will have to determine if it is economically feasible to keep wells producing. If the price per barrel of crude oil is less than the cost to produce it, then the operator will most likely suspend production of his wells until the price of oil rises. Therefore, if the price of oil is down, then the rate of extraction is relatively slow and reserves will last for a longer period of time than if the price of oil is high. If oil prices are up, the rate of extraction will increase significantly because the operator can assume a profit on each barrel produced. Since most production costs remain relatively constant, the higher the price, the more profit per barrel of oil. Therefore, the operator is more likely to extract oil at a faster rate if oil prices are high, which will cause the depletion of petroleum resources more rapidly.

When making long term projections, prices are assumed to be influenced principally by major trends of supply and demand in the world oil market (Energy Information Administration, 1987). Perhaps the overriding influence between now and the year 2010 is the current surplus in world

oil production capacity. In 1986, it was estimated that existing fields were capable of producing approximately nine to ten million barrels per day more than was actually produced. Most of this surplus capacity is in the Organization of Petroleum Exporting Countries (OPEC) of the Persian Gulf, so the reliability of the source is questionable given the political instability of the region. it is assumed that growth in demand will be met primarily from the supply of OPEC oil in this region because there is relatively little excess production capacity anywhere else in the world.

Currently, because of the level of overall economic growth and relatively low oil prices, oil consumption worldwide is expected to increase by more than one million barrels per day, reaching a high of between 48 - 52 million barrels per day by 1990. Then, during the next twenty years, rising oil prices are expected to moderate projected demand (EIA, 1987). However, even with this moderate increase in demand, prices in real terms are expected to remain relatively low, due in large part to the projected surplus in the OPEC oil supply previously mentioned. A range of $27 - $41 per barrel (in 1986 dollars) is projected, with an average price of $33 per barrel by the year 2000 (EIA, 1987). Due to the political instability of the Persian Gulf area, access to OPEC's surplus oil supply cannot be assured. Therefore, if the oil in that area was to become inaccessible, the price could increase to between $55 -$90 per barrel as the supply of oil would fall far short of demand. If this were to occur, Ventura County oil production could be expected to experience a significant increase over the next twenty years.

1.4.2.6 Land Use Regulations

Land use conflicts created by petroleum production typically include on- and off-site environmental impacts, impacts to neighboring sensitive land uses, hazards associated with historic oilfields such as abandoned wells, and siting of development so as to preclude future access to petroleum resources. The impacts of production can be mitigated through the regulatory permit and enforcement processes established by the State and County (including the County Zoning Ordinance). Avoidance of hazards can be facilitated by identifying production sites and by integrating this information in appropriate literature. The public could then be alerted to this potential problem. Urban development could be prevented from obstructing access to petroleum resources by accurately identifying known and potential reserves and designating them as Mineral Resource Areas subject to the Mineral Resource Protection Overlay Zone or similar mechanism.

Petroleum extraction on non-Federally owned lands is regulated by the County Zoning Ordinance and State laws and guidelines. A problem has arisen in that many existing production facilities are operating under archaic, long-term permits that do not provide the degree of regulation afforded by today's Zoning Ordinance. This situation will be corrected as these old permits expire or are modified.

Presently, the U.S. Department of Interior, through the Bureau of Land Management (BLM), has sole authority to issue mineral leases on National Forest lands. The Forest Service's role and authority depends on the type of the mineral involved. Most of Ventura County's North Half is within the Los Padres National Forest, and close coordination between County, State and Federal jurisdictions is necessary in the review of environmental assessments prepared for oil and gas leases.

1.4.3 OTHER MINERAL RESOURCES

Various minerals other than aggregate and petroleum are also extracted in Ventura County. None of these other mineral deposits, however, have been recognized as being of Statewide significance nor do they play a major role in the County economy. These other mineral resources include:

- Expansible shale known as "Lockwood Clay" is exposed at the surface in the Lockwood Valley and Frazier Mountain areas. The Ridgelite

Operation in Lockwood Valley is currently in moderate production of this expansible clay, used for lightweight aggregate.

- Gypsum is found in Quatal Canyon and is currently being mined by Monolith Portland Cement Co. The U.S. Gypsum Co. has been prospecting and evaluating the extent and quality of a significant phosphate deposit and associated gypsum in Chorro Grande Canyon, south of Pine Mountain.

- Currently, small scale prospecting for gold occurs in the Frazier Mountain and Piru areas.

- Three deposits of valuable uranium-bearing strata are located in the North Half, however, none are presently being exploited.

- Decorative rock is currently mined in the Grimes Canyon area.

- Asphalt, borates and limestone deposits were all formerly mined in the County.

1.4.4 CONCLUSIONS

- Ventura County contains valuable aggregate and petroleum resources which are vital to the physical and economic development of the County. These resources warrant protection to ensure their continued availability. Identification of these resources and adoption of a mineral resource protection zone could provide this protection.

- Mineral resource extraction can pose conflicts with adjoining land uses. These conflicts can in turn preclude mineral extraction, therefore resources in proximity to urbanizing areas should be extracted before advancing urbanization prevents their use. A General Plan goal should encourage utilization of resources in urbanizing areas before land use conflicts preclude their use.

- Mineral resource extraction may cause environmental impacts if not appropriately regulated. General Plan Goals, Policies and Programs and the Zoning Ordinance should regulate mineral resource extraction activities. In accordance with CEQA, new development should mitigate any significant impacts caused by development. An enforcement program should ensure adherence to adopted regulations.

- Abandoned oil and gas wells can be hazardous. An attempt should be made to locate all such wells and mitigate any dangers.

- State law requires protection of mineral resources and proper reclamation of mining sites. The General Plan should contain goals, policies and programs to satisfy this requirement.

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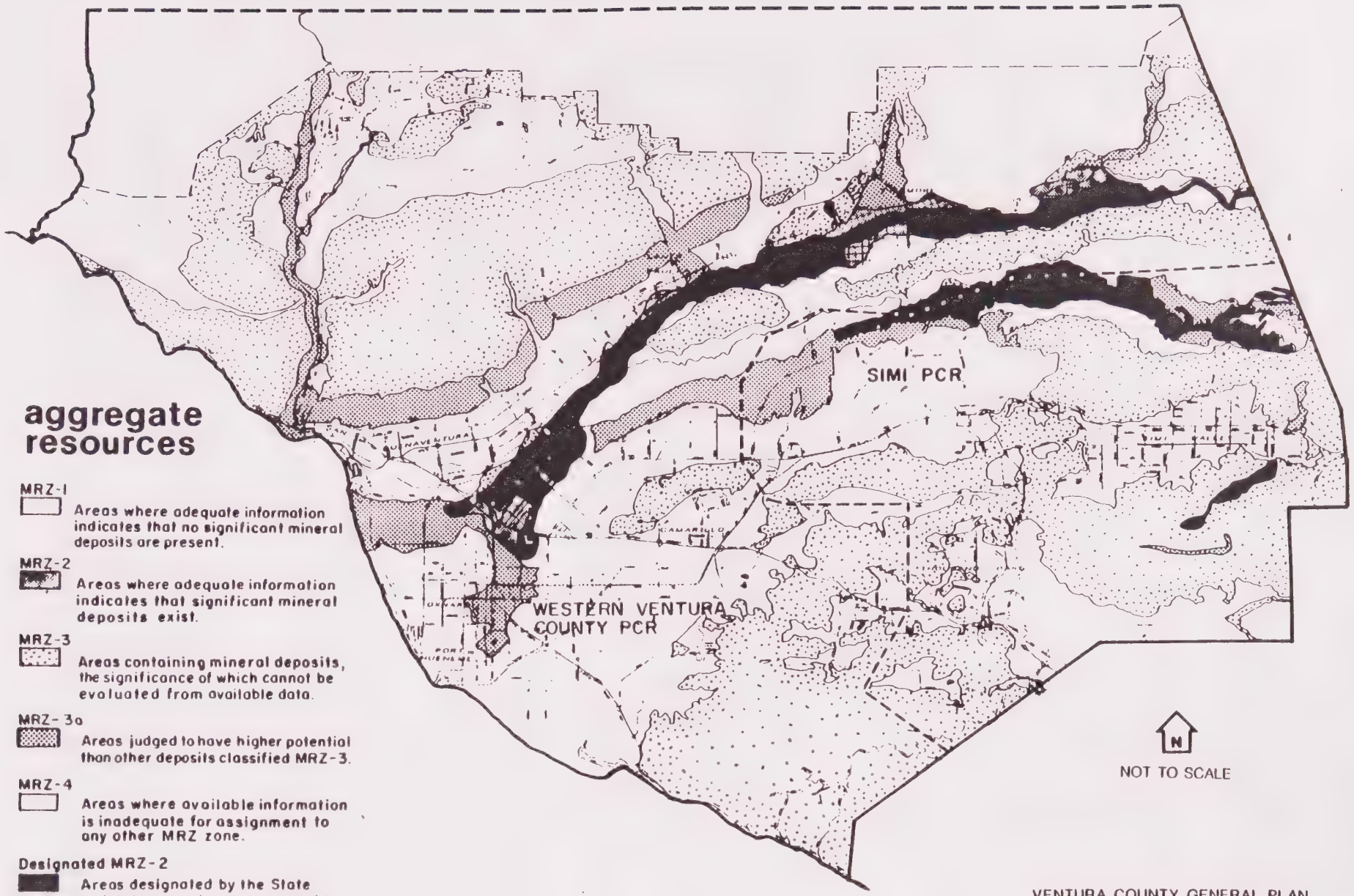
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aggregate resources

MRZ-1
Areas where adequate information indicates that no significant mineral deposits are present.

MRZ-2
Areas where adequate information indicates that significant mineral deposits exist.

MRZ-3
Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

MRZ-3a
Areas judged to have higher potential than other deposits classified MRZ-3.

MRZ-4
Areas where available information is inadequate for assignment to any other MRZ zone.

Designated MRZ-2
Areas designated by the State which have regional or statewide significance.

— — — Production/Consumption Bndry.

Source: California Division of Mines and Geology
Special Report 145
& Open File Report 92-09
Ventura County Planning Division -1985

NOTE: NORTH HALF NOT INVENTORIED BY STATE

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX FIGURE 1.4.1
R.7/12/94

RESOURCES APPENDIX FIGURE 1.4.2
PROJECTED AGGREGATE DEMAND TO 2030

YEARS	SIMI P-C REGION		WESTERN VENTURA COUNTY P-C REGION		SAN FERNANDO VALLEY P-C REGION		SAUGUS NEWHALL P-C REGION	
	5 year per capita consumption = 27.5 tons/person		5 year per capita consumption = 55 tons/person		5 year per capita consumption = 8 tons/person		5 year per capita consumption = 29.3 tons/person	
	Average Population (millions)	Aggregate* Consumption (million tons)	Average Population (millions)	Aggregate Consumption (million tons)	Average Population (millions)	Aggregate Consumption (million tons)	Average Population (millions)	Aggregate Consumption (million tons)
1980-1985	.34**	9	.36	21	2.74	22	80	5
1985-1990	.37	10	.40	23	2.80	22	87	5
1990-1995	.41	11	.44	25	2.86	23	92	6
1995-2000	.44	12	.48	27	2.91	23	95	6
2000-2005	.47	13	.52	30	2.95	24	98	6
2005-2010	.51	14	.57	32	2.97	24	104	6
2010-2015	.54	15	.61	35	2.99	24	110	7
2015-2020	.57	16	.65	37	3.01	24	117	7
2020-2025	.60	17	.70	40	3.03	24	122	8
2025-2030	.63	17	.73	41	3.05	24	127	8
TOTALS		130 (80)***		310 (190)***		230 (140)***		60 (40)***

*Aggregate Consumption = average population (5-year average) x 5-year per capita consumption factor. (Western Ventura County aggregate consumption includes an every five year export of one million tons to Santa Barbara County: for example, for the 1980-1985 period, (.36)(55) = 20 million tons + 1 million tons = 21 million tons).

**Population projections based on data from Ventura County, the State Department of Finance (1977), and the Southern California Association of Governments (1978).

***Approximately 60% of the total aggregate demand will be for Portland Cement Concrete.

Source: Table 2.4 of California Division of Mines and Geology Special Report 145.

RESOURCES APPENDIX FIGURE 1.4.3
SIMI PRODUCTION CONSUMPTION REGION

SECTOR	RESOURCES COVERED BY USE PERMIT (INFERRED RESERVES)			RESOURCES NOT COVERED BY USE PERMIT (INFERRED RESOURCES)			TOTAL
	Fine aggregate suitable for base and asphaltic concrete	Fine aggregate suitable for PCC	Coarse aggregate suitable for PCC	Fine aggregate suitable for base and asphaltic concrete	Fine aggregate suitable for PCC	Coarse aggregate suitable for PCC	
A	40	80	50	None	None	10	180
B	None	None	None	80	None	430	510
C	None	None	None	140	290	110	540
TOTALS	40	80	50	200*	300*	550*	1,200**

All numbers in million short tons.

* Figures rounded off to nearest 50 million.
**Figures rounded off to nearest 100 million.

PCC = Portland Cement Concrete.

Source: Table 2.3 of California Division of Mines and Geology Special Report 145.

RESOURCES APPENDIX FIGURE 1.4.4
WESTERN VENTURA COUNTY PRODUCTION CONSUMPTION REGION

RESOURCE DEPTH INTERVAL	RESOURCES COVERED BY USE PERMIT								RESOURCES NOT COVERED BY USE PERMIT						TOTAL RESOURCES
	REGULATED EXTRACTION LIMIT		RESOURCES CONTAINED BETWEEN SURFACE & BOTTOM OF DEPOSIT		RESOURCES CONTAINED BETWEEN SURFACE & 30' BELOW SURFACE		RESOURCES CONTAINED IN DEPTH INTERVAL BELOW 30' DEPTH		RESOURCES CONTAINED BETWEEN SURFACE & 0 FEET ELEVATION		RESOURCES CONTAINED IN DEPTH INTERVAL BELOW SEA LEVEL		RESOURCES CONTAINED IN TOTAL DEPTH INTERVAL		
HIGHEST AGGREGATE USE	PCC*	MISC*	PCC	MISC	PCC	MISC	PCC	MISC	PCC	MISC	PCC	MISC	PCC	MISC	PCC+MISC
SECTOR															
A	**	**	180	60									180	60	240
B	**	**							140	50	50	20	190	70	260
C									270	90	30	10	300	100	400
D			70	20									70	20	90
E	**	**			90	50	220	110					310	160	470
F					190	60	730	210					920	270	1190
G					160	20	480	60					640	80	720
H					120	20	830	100					950	120	1070
I					70	--	340	--					410	--	410
J					10	--	--	--					10	--	10
COLUMN TOTAL	30	10	250	80	640	150	2600	480	410	140	80	30	3980***	880****	4860

All numbers in million short tons.

*Aggregate is divided into amount of material suitable for use in Portland Cement Concrete (PCC) and remaining material usable only in miscellaneous aggregate products (MISC) - asphaltic concrete, road base, and railroad ballast. Normally material suitable for use in Portland Cement Concrete is also used in miscellaneous aggregate products.
**Cannot be shown due to confidentiality of producer data.
***Includes 265 million tons located under producer properties.
****Includes 100 million tons located under producer properties.

Source: Table 3.3 of California Division of Mines and Geology Special Report 145.

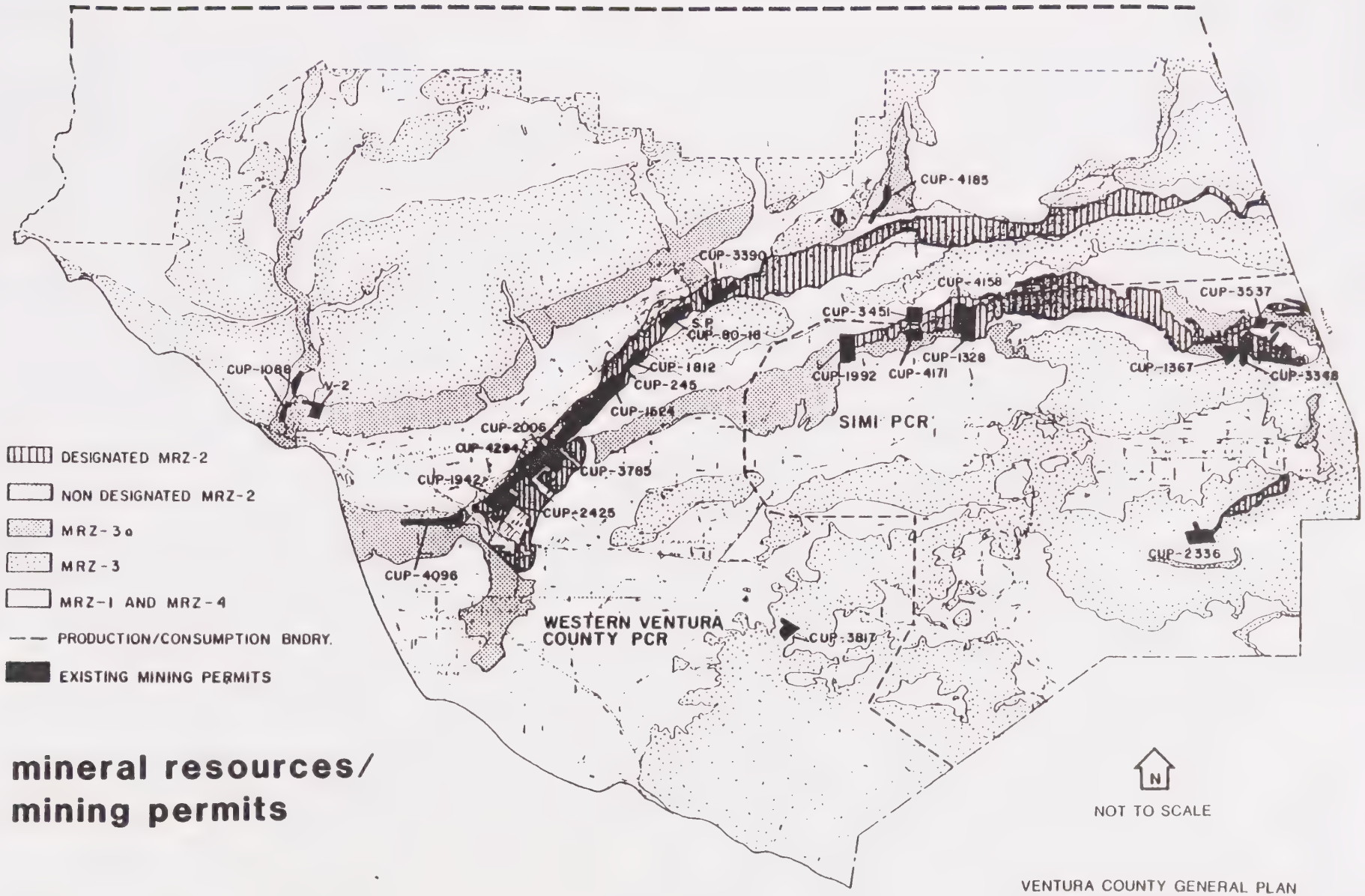
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RESOURCES APPENDIX FIGURE 1.4.5
AVAILABLE PCC QUALITY AGGREGATE IN SIMI PCR

SECTOR	INFERRED RESERVES			INFERRED RESOURCES			TOTAL
	Fine	Coarse	PCC Total	Fine	Coarse	PCC Total	PCC In Sector*
A	80	50	100	0	10	0	120
B	0	0	0	0	430	0	0
C	0	0	0	290	110	220	220
							Cumulative Totals
Total Fine	80			290			370
Total Coarse		50			550		600
							Total PCC Between Sectors
							740

*PCC aggregate required 50/50 mix of fine and coarse material.

All numbers in million short tons.



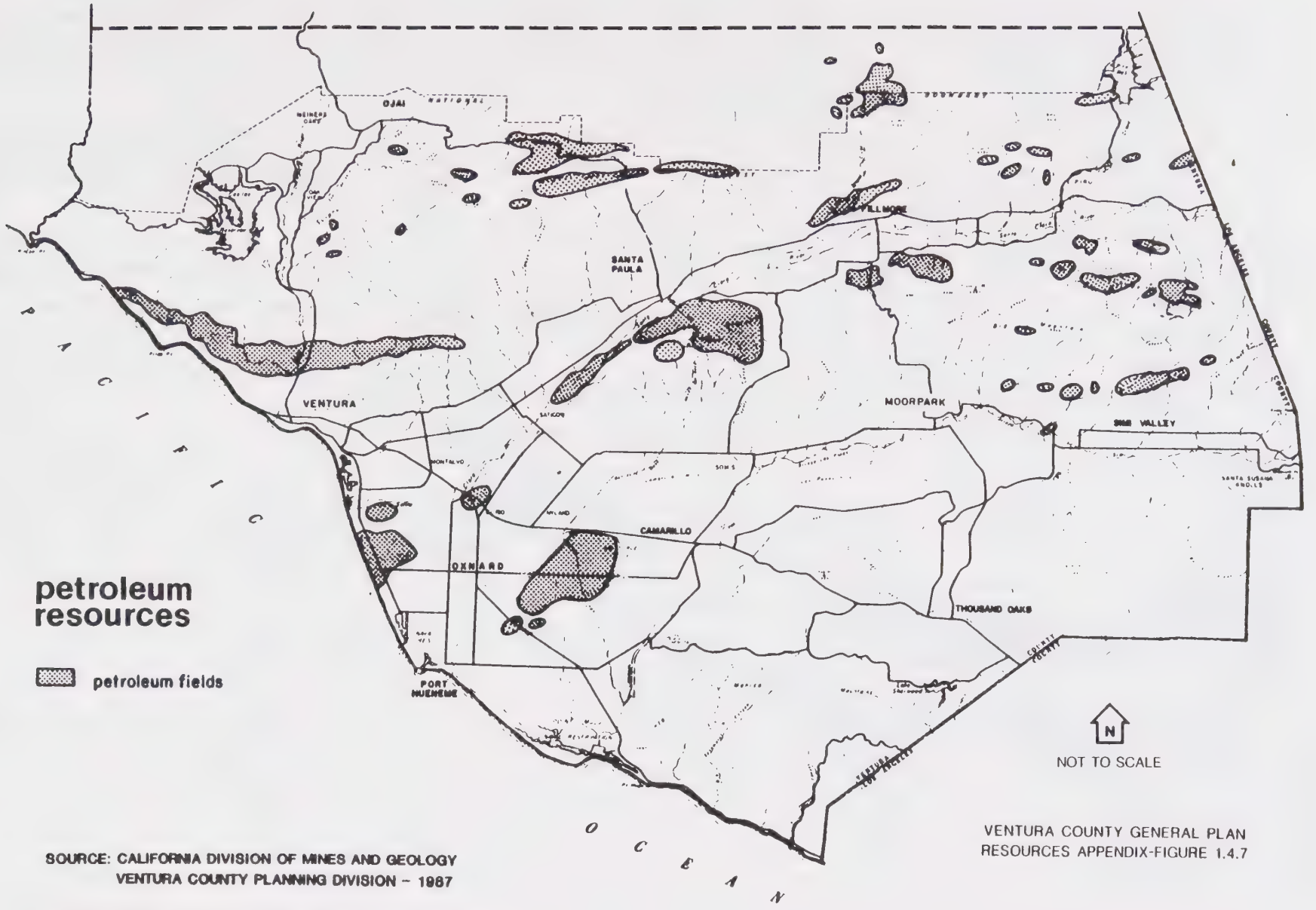
mineral resources/ mining permits

Source: California Division of Mines and Geology
Special Report 145
& Open File Report 92-09
Ventura County Planning Division -1985

NOTE: NORTH HALF OF THE COUNTY NOT INVENTORIED BY STATE

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.4.6

R.7/12/94



SOURCE: CALIFORNIA DIVISION OF MINES AND GEOLOGY
VENTURA COUNTY PLANNING DIVISION – 1987

NOTE: NORTH HALF OF COUNTY NOT INVENTORIED BY STATE

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.4.7

1.5 BIOLOGICAL RESOURCES

The natural ecosystem, with the various species of plants and animals, is a basic resource of Ventura County. All the natural resources (land, water, air, and biology) are part of the ecosystem. Disruption of one part may affect the others. Effects are intimately intertwined and the significance of those effects also is difficult to determine without consideration of the whole system.

All species and ecosystems are of aesthetic, ecological, educational, historic, recreational and scientific value to the people of Ventura County. Natural ecosystems which are conserved are productive, and many of these products are utilized by the human population. Of major concern in Ventura County are water production and watershed protection. Hunting, fishing, and outdoor recreation are consumptive uses. It is important to recognize that wildlife are publicly owned and are not held by owners of private land where wildlife are present. The habitat including the vegetation is, however, generally under the control of the individual land owners and the supervision of County agencies. It is the protection of this habitat which is most critical to maintenance of a healthy ecosystem and protection of fish and wildlife species, especially those which are **rare, threatened or endangered.**

Various species of fish, wildlife and plants in Ventura County have become extinct as a consequence of urban growth and development "untempered by adequate concern and conservation." Other species of fish, wildlife and plants have been depleted in numbers and have experienced a loss of habitat and disruption of the ecosystem of which they are a part. This habitat destruction occurs most often as a result of human activity, such as the introduction of non-native species to an environment, the exploitation of natural resources, or urban growth.

The following section discusses Federal and State law pertaining to **biological resources.** Following this are sections on vegetation, fish and wildlife, **rare, threatened,** and **endangered species,** locally unique habitats and resource management.

1.5.1 BIOLOGICAL RESOURCE LAWS AND REGULATIONS

Federal and State governments have developed laws and regulations designed to protect biological resources under their jurisdiction or that may be affected by the actions they undertake. Many of the resources are under direct Federal protection (e.g., coastlines and navigable rivers). Fish and wildlife resources are under State jurisdiction. Local governments are responsible for the majority of ecosystem components, while abiding by both Federal and State laws.

1.5.1.1 Federal Legislation

Federal legislation regarding biological resources has many focal points. Laws cover a broad range of issues and cover many levels of authority, responsibility, and accountability down to local jurisdictions. Federal legislation is important not only because it sets national policy, but also because it provides a number of systems for biological resource conservation and evaluation. Federal law also establishes programs of funding through grants and loans to states and local jurisdictions. It is important to note that although California law closely follows Federal law in many areas of biological resource protection, State laws and regulations do not overshadow those of the Federal system. This is particularly relevant for those resources over which the Federal government maintains jurisdiction.

There are a number of species specific laws and regulations for protection, conservation and commercial use. Programs are provided for designation and management of lands in systems for biological conservation (e.g., in Ventura County, Hopper Mountain National Wildlife Refuge, Dick Smith Wilderness, Channel Islands National Park, Santa Monica Mountains National Recreation Area, and the proposed Sespe Creek Wild and Scenic River).

Laws protecting the soil, water and air resources from destruction or pollution directly affect the conservation of fish, wildlife and plant habitats.

Perhaps the most influential Federal acts are the National Environmental Policy Act of 1969, the Coastal Zone Management Act of 1972, the Endangered Species Act of 1973, and the Fish and Wildlife Conservation Act of 1980, which are summarized below.

(1) National Environmental Policy Act of 1969 (NEPA)

This Act represents the first major attempt by Congress to declare a National policy which encourages productive and enjoyable harmony between man and his environment, promotes efforts which prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man, enriches the understanding of the ecological systems and natural resources important to the Nation, and establishes a Council on Environmental Quality (CEQ). The CEQ issues regulations for implementation of the NEPA procedures which apply to all Federal agencies and all projects which involve the use of Federal funds. NEPA is the forerunner to the California Environmental Quality Act and there are striking similarities. The key difference is that NEPA does not require the identification and evaluation of potential growth inducement factors and mitigation measures.

(2) Coastal Zone Management Act of 1976

The major provision of this Act is to "encourage and assist" states to develop and implement management programs in the coastal zone. The requirements for subjects to be discussed in coastal plans are extensive and broad in scope. The emphasis is strongly placed on the protection of the coastal zone ecosystem and management of natural hazards.

(3) Endangered Species Act of 1973

This Act provides for the protection of endangered and threatened species and the ecosystem upon which they depend. When species are entered on Federal lists, specific regulations are included which are species specific. California has since enacted a similar State program for protection of additional species, although, in case of conflict, Federal law prevails. In Ventura County there are several plant and animal species on the Federal listings.

(4) Fish and Wildlife Conservation Act of 1980

This Act, as does the Coastal Zone Management Act, provides direction to states to develop and implement conservation plans and programs for nongame fish and wildlife. The plan requirements are extensive and include inventories, identification of problems and opportunities, and action implementation.

1.5.1.2 California Legislation

State legislation concerns a variety of habitats and ecosystems. These include all wetlands and water resources, whether perennial or seasonal; they include unique resources, such as oak groves or perennial grasslands, as well as isolated pockets of native vegetation, such as big-cone douglas fir in the chaparral. All native vegetation is protected, and its loss through development should be considered a definite effect with potentially serious significant impacts.

The California Environmental Quality Act (CEQA) follows the philosophy and evaluation procedures set forth in NEPA. CEQA provides for recognition of biological issues as part of the environmental review of projects. On a daily basis this Act has major significance in Ventura County.

In addition to CEQA there are a number of significant laws relating to biological resources in California. The Wildlife Conservation Law of 1947 was the first major law to set forth the State policy of preservation, protection, and restoration of wildlife and the acquisition, restoration and maintenance of high productivity habitat. The Native Species Conservation and Enhancement Act defines the policies of the State to maintain sufficient populations of wildlife and native plants and their habitats for their beneficial use and enjoyment by the citizens, and for their intrinsic and ecological values as well as their direct benefits to man. The California Native Plant Protection Act gives the California Department of Fish and Game the power to "preserve, protect, and enhance endangered plants of this state." The Fish and Wildlife Habitat Enhancement Act of 1984 is intended to provide the financial means to meet the objectives of assuring adequate habitat, with the resulting increase in the abundance of fish and wildlife. The California Endangered Species Act, like the Federal Act, provides for protection of endangered and threatened plant and animal species. The Fish and Game Commission establishes a list of species to be protected and State agencies must consider options in project planning to conserve the species and their habitats.

The State General Plan Guidelines describe the inclusion of biological resource information in several elements of the General Plan. The California Coastal Act provides for a comprehensive program for the entire coastal zone. Local coastal programs are required to include a land use plan, zoning ordinance and other measures for implementation.

1.5.2 NATIVE VEGETATION

The diverse climate and topography in Ventura County have given rise to establishment of a wide range of plant communities. Native vegetation in Ventura County can be categorized into seven general plant communities: grasslands, coastal sage - scrub, chaparral, oak woodland, riparian, pinyon - juniper, and timber - conifer (see Figure 1.5.1). Many subgroups or localized distinct groups can be discerned, however the map scale selected does not afford their inclusion.

In the south half of the County, much native vegetation has been extirpated due to urban and agricultural development. For the most part, this development is confined to the fertile valleys and plains, and along the coastline. Consequently, most of the mountainous areas in the south half still support significant native plant communities.

Chaparral is the most common type of vegetation association in the County and consists of many species of woody shrubs which can attain heights greater than twelve feet and are often densely arranged. Chaparral is generally located on steeper slopes and has characteristics which make it highly flammable. The coastal sage - scrub association contains many plants of the chaparral, but is located at lower elevations (generally below 3000 feet) and is dominated by sages that are generally only three to four feet in height and are more widely spaced than those in the chaparral.

Grassland vegetation is not common, and as groundcover, is usually associated with oak woodland or open areas. The La Jolla valley in Point Mugu State Park is the only area in the County that still contains native bunch grasses in pure stands, and is considered a locally unique habitat.

The oak woodland community in Ventura County contains the easily identifiable valley oaks, with trees 20 to 60 feet tall and grassland and soft shrubs as groundcover, as found in the Thousand Oaks, Lake Casitas, and Hidden Valley areas. A large area of foothill oak woodland is found on Sulphur Mountain.

Riparian vegetation is significant due both to its rarity and its high value as wildlife habitat and use as migration corridor(s). Riparian vegetation is found along most of the permanent and ephemeral streams

within the County. Typical trees of this community include sycamores, willows, cottonwoods, and alders. Extensive riparian growth lines Piru, Sespe, and Santa Paula Creeks, and the Santa Clara and Ventura Rivers.

The diversity of topography and climate in the North Half has resulted in a range of vegetation communities from Mediterranean-climate chaparral to subalpine forest, from desert shrublands to riparian woodlands. The front ranges south of Pine Mountain Ridge are largely covered with chaparral. Riparian vegetation borders all perennial and many intermittent streams. Pine Mountain Ridge with the highest point, Reyes Peak (7810 feet), supports a significant band of ponderosa pine forest from west to east across the County. The north slopes of Pine Mountain Ridge are covered with thick, mixed chaparral. The badlands and low elevation areas in the northwest corner of the County grade from desert scrub into pinyon-juniper woodlands on the higher and wetter sites -- especially up Quatal and Apache Canyons. Lockwood Valley probably once supported native grasslands and meadows and is largely in ranching today. The mountains to the north, Mount Pinos (8831 feet) and Sawmill Mountain, and east Frazier Mountain (8013 feet), support ponderosa pine forests which at the highest elevation on Mount Pinos grade into subalpine limber pine. To the east, pinyon-juniper woodlands cover much of the mountains with sagebrush in the valleys. Hungry Valley on the northeast corner was characterized as a native grassland and the valley is still surrounded by a significant valley oak woodland. Oak woodlands are found in other isolated, localized areas of the North Half as are freshwater marshes (e.g., the Potholes at Devil's Potrero).

The Forest Service gives the following acreages by vegetation type for the North Half:

	Acres
Conifer	76,538
Pinyon-juniper	143,477
Oak forest	13,134
Oak woodland	3,186
Grassland	4,400
Mixed chaparral	101,612
Chamise & desert chaparral	196,204
Sagebrush	22,085
Barren	2,807
Urban (near Ojai)	695

Approximately 81% of the parcels of private land in the North Half are currently vacant with native vegetation (or with the disturbed grassland typical or an area previously grazed). The large isolated ranches are almost all in pasture or cultivation in forage crops such as alfalfa. Development in Lockwood Valley has partially been into the pinyon-juniper community. For the most part, there has been only spotty destruction of the native vegetation (except loss of the native perennial grasslands).

1.5.3 FISH AND WILDLIFE

Although fish and wildlife are **renewable resources**, the rates of renewal are usually very slow and are often impeded by such disruptive forces as urbanization, human harassment, predator control and pollution. Important fish and wildlife habitats are located on the **Significant Biological Resources** Map, (Figure 1.5.2).

The naturally vegetated areas of the County provide shelter, food, and nesting areas to create habitats for a wide variety of animal species. Each plant community has different characteristics which support different species of wildlife, although a species may use various habitats at different times of the year or at various stages in the animal's life cycle.

The low-elevation, drier plant communities, such as the grasslands, coastal sage-scrub, and chaparral, support a wildlife population which includes rodents, insectivores, hares, fox, coyotes, raptors (such as hawks, falcon, owls, and eagles) and numerous perching birds, from hummingbirds to ravens. The upland plant communities, such as the oak woodlands, pinyon-juniper, and timber-conifer, provide habitats for larger animals as well, and include populations of bobcat and mountain lion, mule deer, and black bear, in addition to a game population of quail, rabbit, tree squirrel, band-tailed pigeon, dove, turkey, and chukar (partridge). Reptiles are commonly found throughout the County.

The two big game species found in the North Half are California mule deer and black bear. Mule deer range throughout the area utilizing the higher regions in warm seasons and the valley during winter when the mountains are snow covered. Sheltered and isolated valleys and marshes serve as fauning areas in the spring. Their main home range extends from about 3750 feet up.

There are seven major species of upland game which occur primarily in the mountain areas: quail, rabbits, tree squirrels, band-tailed pigeons, dove, turkey and chukar. There are no good population estimates of any of these upland game species due to lack of adequate field data.

The vast majority of wildlife species on the Los Padres National Forest (and within Ventura County) falls within the nongame category. There are at least 64 species of birds, 61 mammals, 32 reptiles and 16 amphibians which constitute this nongame group. These species are listed in the U.S. Forest Service Wildlife Survey of 1982. Because of the vast number of species and respective types of habitat needs, and due to generally low public interest or support for these nongame species, they have not generally been addressed in past wildlife management projects, except for those designated rare candidate, threatened or endangered species. This situation has prevented adequate nongame management so that many of these species are at population levels well below habitat potentials (Freel, 1982).

Although owls and cuckoos were once prevalent along the riparian green belts, their populations have been greatly diminished due to human intrusion and modification of these habitats.

1.5.4 ENDANGERED, THREATENED, AND RARE SPECIES

Pursuant to State and Federal legislation, the California Department of Fish and Game (CDF&G) and the U.S. Fish and Wildlife Service (USF&WS) have established lists of Endangered, Threatened and Rare (CDF&G only) Species. In addition, the USF&WS lists species as: candidates for listing as endangered or threatened. Various additional species are considered sensitive by biologists.

Ventura County is home to numerous species of plants and animals that are **endangered, threatened**, **rare**, or considered to be a **candidate** for one of those designations. A full listing of these species, with their State and Federal designations and a general description of their location is found in Figure 1.5.4. The areas where these species are known to be located are also depicted on the Significant Biological Resources map, (Figure 1.5.2). The definitions of the above mentioned designations can be found in the Glossary.

Extirpated Species: Eight species of native animals no longer exist within the County. The California grizzly bear (extinct), red wolf, tule elk, peregrine falcon, unarmoured threespine stickleback, desert bighorn sheep, antelope, and California condor did not survive the rapid growth of the human population in Southern California. However, State and Federal agencies remain optimistic about current efforts to reintroduce the tule elk, bighorn sheep and the California condor into various habitats in the County.

1.5.5 LOCALLY UNIQUE HABITATS

Ventura County contains several areas that are of **unique** significance due to their ability to provide habitat for endangered, rare and threatened species or because they constitute an example of a unique plant community.

The coastal wetlands and lagoons found along the south coast of the County provide shelter, forage, and nesting areas for thousands of birds, fish, mollusks, crabs, seals, and many other marine organisms and plants. The wetland area with the richest diversity is the Mugu Lagoon, which shelters the remnants of many plant, bird, fish, and insect populations which once inhabited the coast from the Ventura River to the Santa Monica Mountains. Other wetlands include the McGrath Lake and Ormond Beach areas, and the mouths of the Ventura and Santa Clara Rivers. These areas are considered significant biological resources (see Significant Biological Resources Map, Figure 1.5.2).

The Pothole in the Devil's Potero, on the Agua Blanca Creek, is an inland freshwater marsh that contains several small species of plants that are unique to freshwater marshes. It is located in the Los Padres National Forest, and is within the Sespe Condor Sanctuary.

The Sespe Creek is designated as a "Wild Trout Stream" by the State of California. The steelhead trout, an anadromous fish, uses this stream as its spawning area. The Pacific lamprey, an anadromous vertebrate, also uses the Sespe Creek (and the Santa Clara River) for its spawning area. The creek also supports a significant population of rainbow trout, cousin to the steelhead. The "Wild Trout Stream" designation affords some protection of water flows and riparian vegetation, both threatened by water development projects. In addition, the Forest Service has proposed that a 28½ mile portion of Sespe Creek receive a "Wild and Scenic River" designation. The Sespe is also mapped as a Significant Biological Resource.

The Santa Clara River east of Piru is the last remnant of relatively undisturbed riverine habitat in the county. Several endangered, threatened, and rare species of birds have been sighted in this area, and nowhere else in the County, over the past few years.

The Ventura River deserves mention as it currently supports a limited population of rainbow trout in the Foster Park area and a limited steelhead run in the River and San Antonio Creek. According to the State Department of Fish and Game, the River has the potential for the introduction of a steelhead and chinook salmon fishery in the future. Local populations of steelhead and rainbow trout along the Ventura River have nearly been eliminated, a result of dam construction and water pollution from agricultural operations and septic system leachate.

Ventura County has two large areas set aside as sanctuaries for the California Condor. Although there are (as of 1986) no longer any of these rare and majestic birds living in the wild, the U.S. Fish and Wildlife Service remains hopeful that its Condor Recovery program, involving captive breeding and eventual release, will again allow the condor to safely exist and repopulate in Southern California. As a result, both Matilija and Sespe Condor Sanctuaries remain as significant biological habitats, as shown on the Biological Resources Map.

The Sespe Condor Sanctuary was dedicated in 1947 and consists of 53,000 acres (see Figure 1.5.3). The majority of known sites historically used for nesting (25 of 33) are located within its boundaries. The sanctuary contains extensive rocky canyons, cliffs and areas of bare sandstone interspersed with dense chaparral. Big-cone douglas fir and incense cedar found in scattered locations are used for roosting. The area is closed to public entry, although there are two north-south travel corridors--one along Sespe Creek and the other along Forest Service Trail 20W11 through Squaw Flats. There is no shooting allowed within the Sanctuary and in some surrounding critical condor habitat.

The Sanctuary is surrounded on the west, north and east by critical condor habitat and the Hopper Mountain National Wildlife Refuge is to the south of the Hopper Mountain area. "Critical" condor habitat was described for three areas in Ventura County: Mount Pinos, Matilija and Sespe-Piru (Federal Register, Vol. 41, No. 187, September 24, 1976). All Federal agencies must ensure that actions authorized, funded, or carried out by them do not result in the destruction or modification of these critical habitat areas.

"Essential" habitat are those areas intended to supplement the officially designated critical habitat. These areas have no legal status (a "Critical Habitat" is a legal status); however, the habitat managementrecommendations are intended to be applied with equal emphasis in these areas. Both areas in Ventura County extend the Sespe-Piru critical habitat -- on the northeast to Liebre Mountain in Los Angeles County and the west to Madulce Peak in Santa Barbara County. The boundaries will be updated as needed.

Hopper Mountain National Wildlife Refuge (N.W.R.) lies adjacent to the Sespe Condor Sanctuary on the east and south just outside the Los Padres National Forest. The 1,871 acres is comprised of rugged mountains, rock out-croppings, chaparral, hardwood groves, stands of douglas fir and open grasslands. The area is a traditional working cattle ranch. A variety of raptorial birds reside there year-round. Condor use was infrequent--probably due to the surrounding land uses, especially oil and gas exploration.

1.5.6 CONCLUSIONS

Various governmental agencies provide for the protection and preservation of the County's plant and animal communities. The State Department of Agriculture has the power to regulate and control the use of fertilizers, herbicides and pesticides. The County Agricultural Commissioner, governed by the State Agricultural Code, is responsible for the protection of the public from harmful plant diseases and pests.

Among the agencies which help protect and preserve the County's fish and wildlife are the U.S. Department of the Interior and the State Department of Fish and Game. The U.S. Navy controls all research activities within the Mugu Lagoon, and the U.S. Forest Service is responsible for the preservation of wildlife habitats within the Los Padres National Forest. The Forest Service has plans to reintroduce a number of wildlife species into the forest. Peregrine falcons will be introduced over time as animals and funds are available. Bighorn sheep from Cattle Canyon on the Angeles National Forest and Lytle Creek on the San Bernardino National Forest are to be transplanted in upper Piru Canyon. Turkeys, once common on Sulphur Mountain, are also to be reintroduced.

Both the Forest Service and Ventura County Fire Department (through the California Vegetation Management Program) are conducting prescribed burns, primarily in the chaparral. Mosaic blocks of perhaps 2,000 - 4,000 acres will be burned every 20-30 years. This burning will allow a rejuvenation of the vegetation beneficial to wildlife.

Among the issues raised in the "Biological Resources" discussion are management and land use practices which conflict with the protection and preservation of the County's plant and animal species. The use of poisons and traps has led to the indiscriminate killing of many animals. However, the greatest threats to the survival of the various biological communities are urbanization and other forms of human intrusion. Problems related to urbanizing pressures, such as increased fire danger, as well as water, air and noise pollution, have contributed to the degradation and/or destruction of many habitats. Introduction of predators and human harassment have affected wildlife and introduction of invasive nonnative species has disrupted plant communities.

Local agencies such as the County Planning Division and the Public Works Agency can aid tremendously in protecting sensitive areas and species. Protection can usually be accomplished through appropriate project design after a site survey and project review have been performed by a qualified biologist.

General Plan Goals, Policies and Programs should foster adequate project review and protection of biological resources. Controlled burning should be promoted by the Fire Protection District.

The interdependence of all life forms and the ecological needs for a stable and well-balanced environment must be recognized so that a healthy coexistence between human and natural biological communities can be assured.

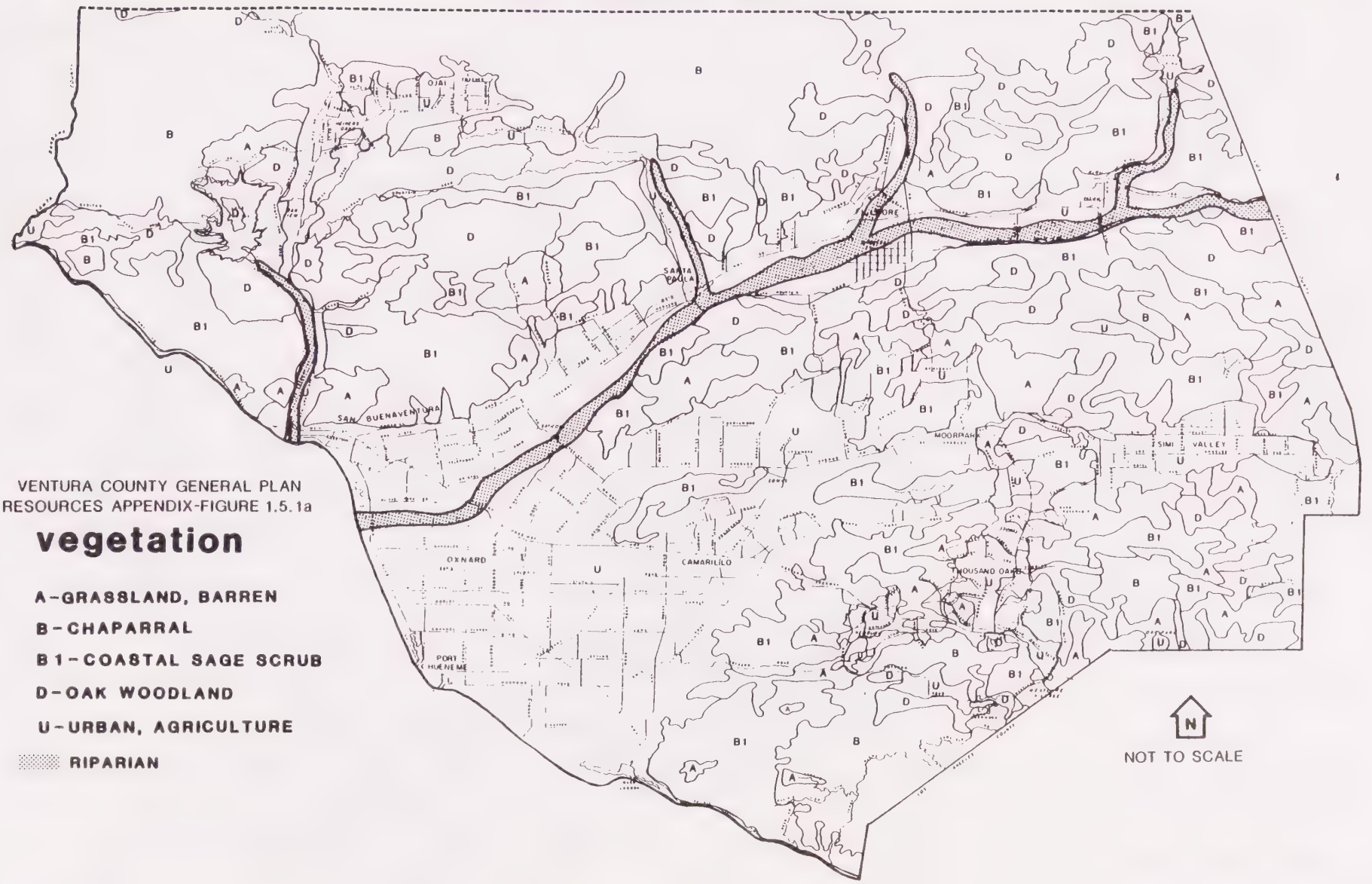
REFERENCES CONSULTED

James, Susanne M., Biological Resource Law and the Compliance Process. Unpublished Manuscript, County of Ventura, Resource Management Agency, November 1985.

Ventura County Planning Division, Ventura County General Plan, Open Space and Conservation Elements, 1986.

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NORTH HALF MATCH LINE



VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.5.1a

vegetation

A-GRASSLAND, BARREN

B-CHAPARRAL

B1-COASTAL SAGE SCRUB

D-OAK WOODLAND

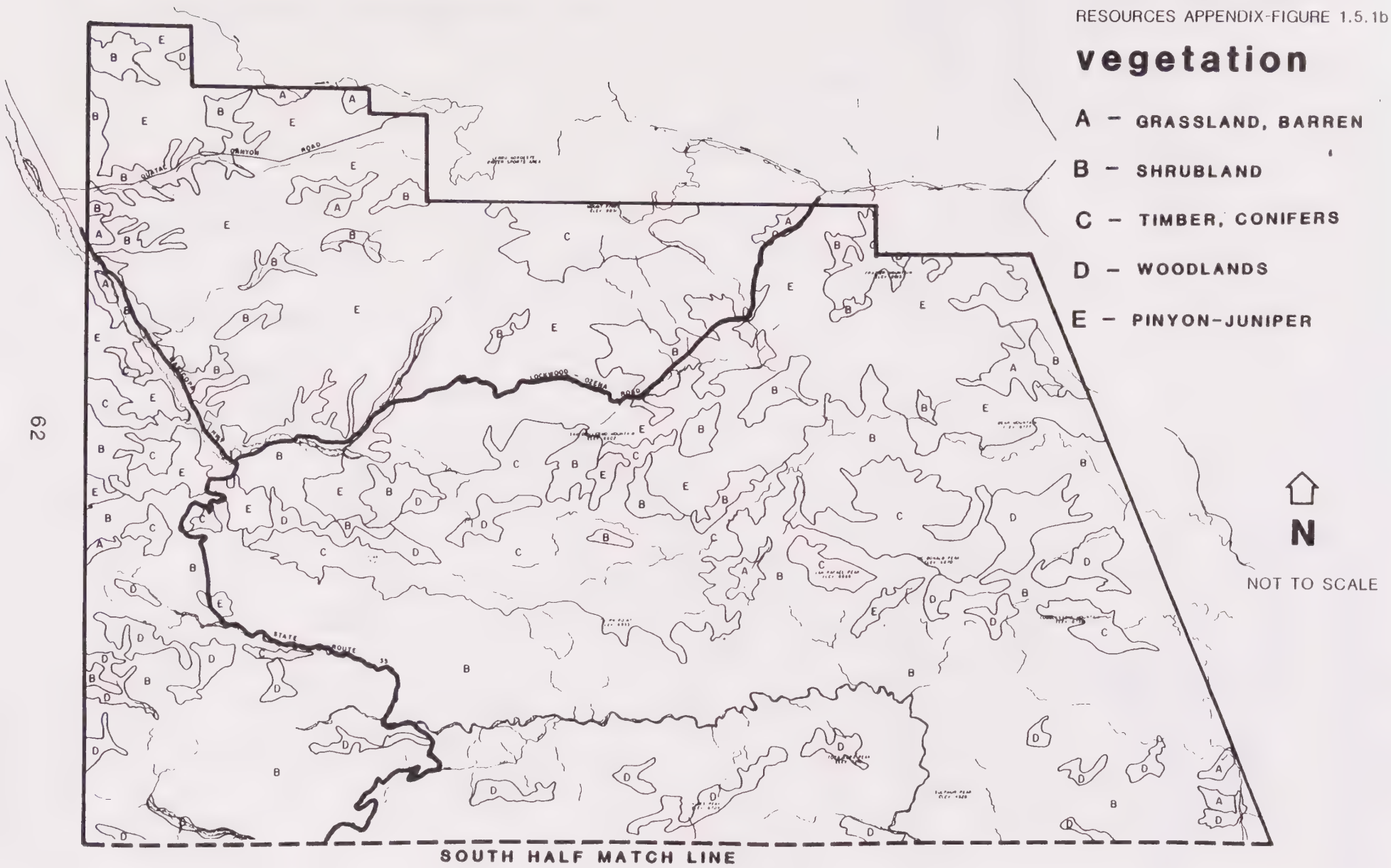
U-URBAN, AGRICULTURE

RIPARIAN

NOT TO SCALE

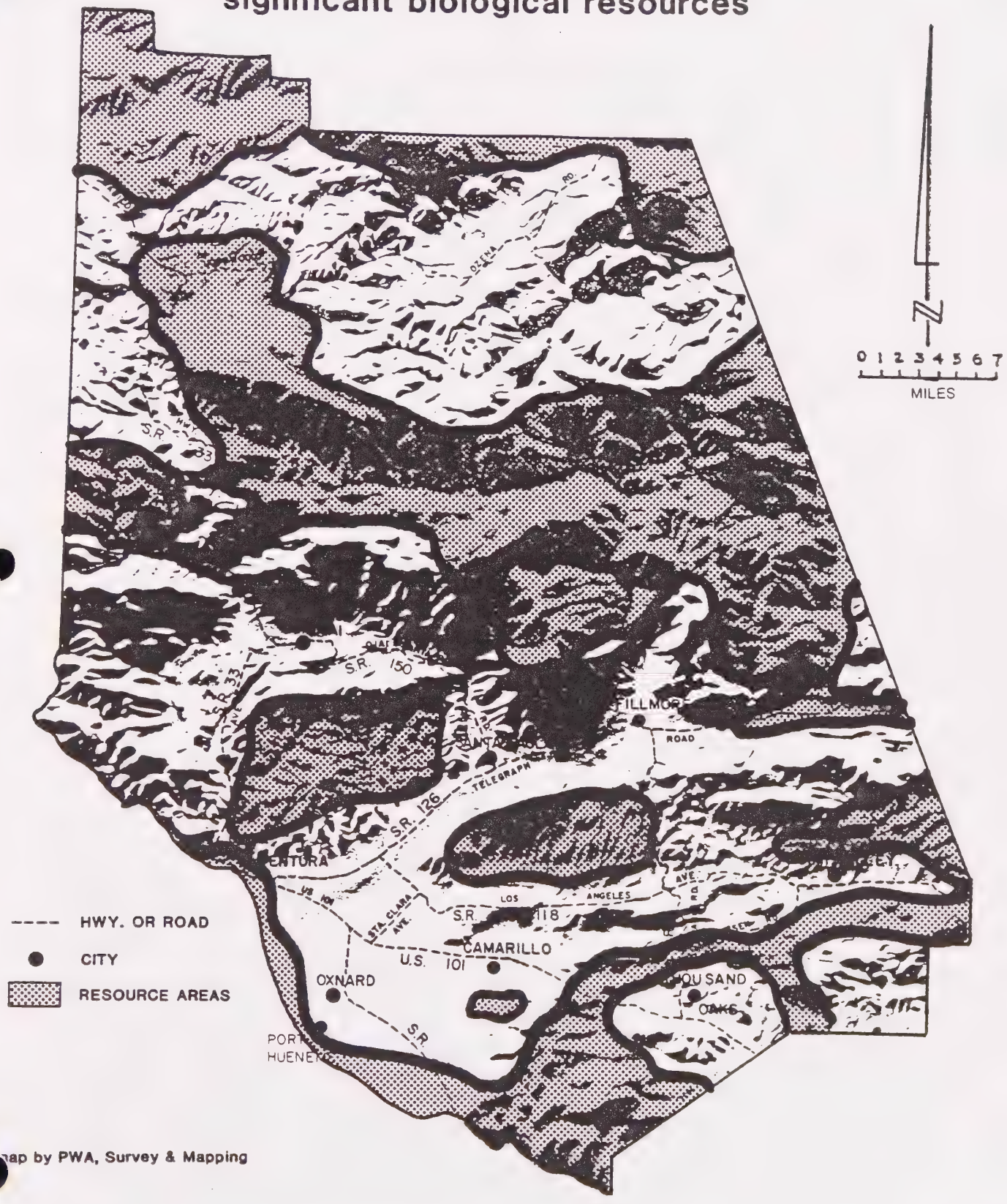
SOURCE: VENTURA COUNTY PUBLIC WORKS AGENCY - 1987

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.5.1b



SOURCE: USDA – FOREST SERVICE 1986

significant biological resources

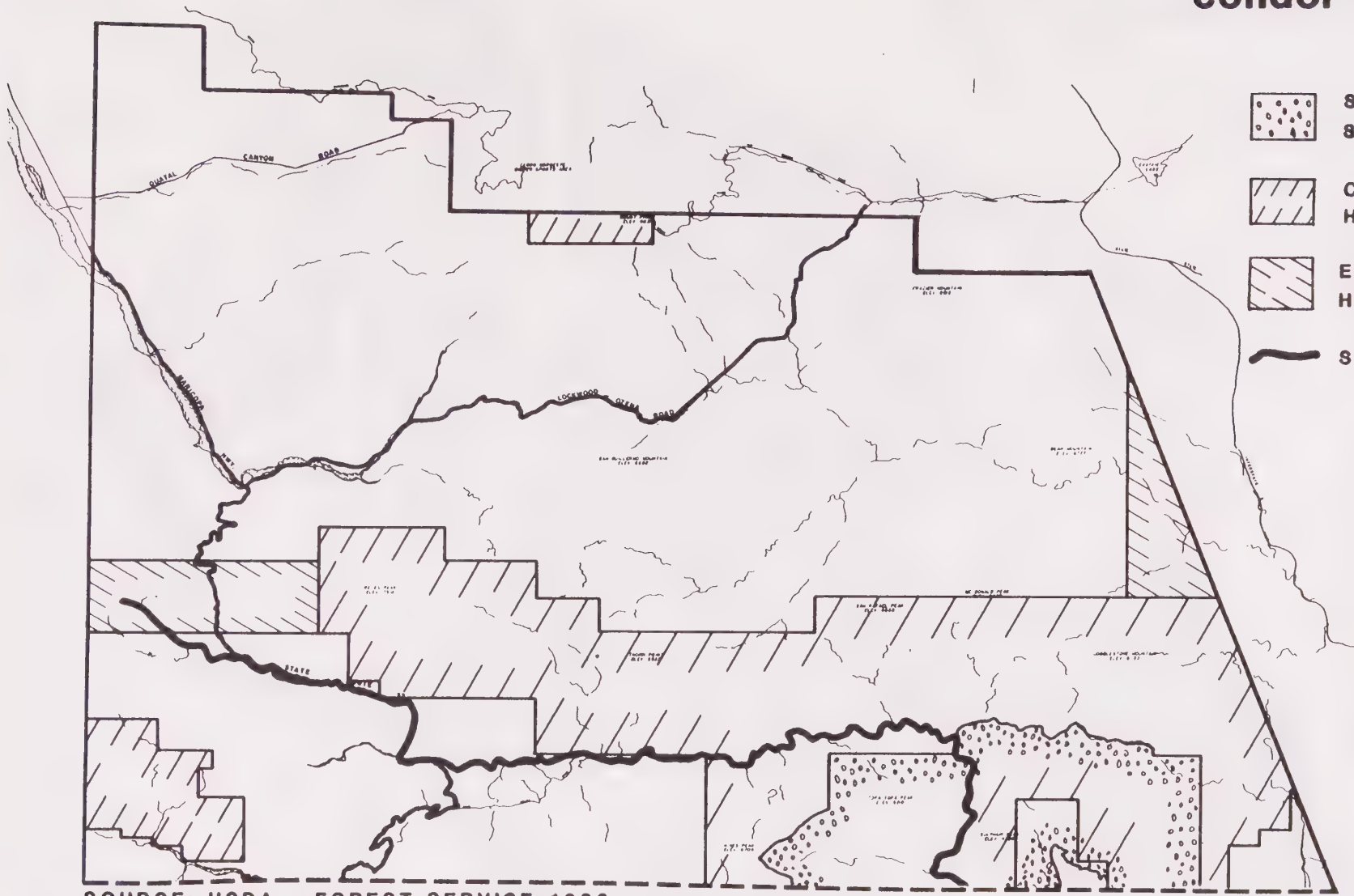


Base map by PWA, Survey & Mapping

Resource Areas adapted from California Natural Diversity Data Base Inventory, July, 1987

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.5.3

condor habitat



SOURCE: USDA - FOREST SERVICE 1986
CALIFORNIA DEPT. OF FISH & GAME

Figure 1.5.4

CANDIDATE, RARE, THREATENED, ENDANGERED SPECIES KNOWN TO EXIST IN VENTURA COUNTY

This list was compiled from the 1987 Natural Diversity Data Base (NDDB) of the California Department of Fish and Game. The mapping of known habitat locations of species of the NDDB has been incorporated in the map of Significant Biological Resources.

	SPECIES	LEGAL STATUS		LOCATION OF OBSERVATION
		FEDERAL	CALIFORNIA	
1	California Condor/Spec. Habitat	endangered	endangered	Sespe Sanctuary
2	San Joaquin Pocket Mouse	candidate		Quatal Canyon
3	San Joaquin Antelope Squirrel	candidate	threatened	Ballinger Canyon
4	Blunt Nose Leopard Lizard	endangered	endangered	Ballinger Canyon
5	Southern Rubber Boa	candidate	threatened	Cuddy Valley
6	Flax-Like Monardella	candidate		Cuddy Valley
7	California Condor/Spec. Habitat	endangered	endangered	Matilija Sanctuary
8	San Diego Thornmint	candidate	endangered	Bear Canyon
9	Santa Susana Tarweed	candidate	rare	Simi Hills
10	Dudleya Verityi	candidate		S. of Camarillo
11	Conejo Buckwheat	candidate	rare	S. of Camarillo
12	Least Bells Vireo	endangered	endangered	Ojai Valley
13	Santa Monica Mts. Dudleya	candidate	rare	Hidden Valley
14	Conejo Dudleya	candidate		Conejo Mt. Area
15	Dudleya Verityi	candidate		Conejo Mt. Area
16	Conejo Buckwheat	candidate	rare	Conejo Mt. Area
17	Lyons Pentachaeta	candidate		Wildwood Park, T.O.
18	Snowy Plover	candidate		Ormond Beach
19	Western Yellow Billed Cuckoo	candidate	threatened	Sta. Clara River, Vta.
20	California Black Rail	candidate	threatened	Ormond Area
21	Beldings Savannah Sparrow	candidate	endangered	Ormond Beach
22	California Least Tern	endangered	endangered	Ormond Beach
23	Ventura Marsh Milk Vetch	candidate		Oxnard Area
24	Salt Marsh Bird's Beak	endangered	endangered	Ormond Beach
25	Snowy Plover	candidate		McGrath
26	Tidewater Goby (fish)	candidate		Sta. Clara Estuary

Figure 1.5.4 (Cont.)

	SPECIES	LEGAL STATUS		LOCATION OF OBSERVATION
		FEDERAL	CALIFORNIA	
27	Beldings Savannah Sparrow	candidate	endangered	McGrath Beach
28	California Least Tern	endangered	endangered	McGrath Beach
29	Ventura Marsh Milk Vetch	candidate		McGrath Beach
30	Snowy Plover	candidate		Mugu Lagoon Sandspit
31	Globuse Dune Beetle	candidate		Pt. Mugu NAS
32	Tidewater Goby (fish)	candidate		Mugu, Calleguas Creek
33	Saltmarsh Skipper (insect)	candidate		Pt. Mugu NAS
34	Beldings Savannah Sparrow	candidate	endangered	W&E Mugu Lagoon
35	Light Footed Clapper Rail	endangered	endangered	E. Mugo Lagoon
36	California Brackishwater Snail	candidate		W. Mugu Lagoon
37	California Least Tern	endangered	endangered	NW of Pt. Mugu NAS
38	Salt Marsh Bird's Beak	endangered	endangered	Arnold R., PMTC
39	CA Blacktailed Gnatcatcher	candidate		W. Santa Paula
40	Least Bells Vireo	endangered	endangered	ENE of Santa Paula
41	Least Bells Vireo	endangered	endangered	Sta. Clara R. Saticoy
42	Least Bells Vireo	endangered	endangered	Arroyo Simi, Vta. Co.
43	Brautons Milk Vetch	candidate		N. End of Kanan Rd.
44	Conejo Dudleya	candidate		Norwegian Grade
45	Conejo Buckwheat	candidate	rare	N. of Lake Eleanor
46	Lyons Pentachaeta	candidate		Westlake Blvd. (mts.) - Lake Sherwood
47	Santa Monica Mts. Dudleya	candidate	rare	Little Sycamore Cyn.
48	Western Yellow Billed Cuckoo	candidate	threatened	E. of Piru
49	Least Bells Vireo	endangered	endangered	E. of Piru
50	Tidewater Goby (fish)	candidate		N. Ventura River
51	Ojai Fritillary	candidate		Wheller Gorge

The following species are listed as "sensitive" by the Natural Diversity Data Base which indicates that they are considered to meet the definition of "rare" or "threatened" but have not yet been officially listed as such: Prairie Falcon, Santa Ana Sucker (fish), Spotted Owl, Yellow Breasted Chat, Tiger Beetle (gravida and frost), Bank Swallow, Cooper's Hawk, Yellow Warbler and Black Shouldered Kite (protected).

1.6 FARMLAND RESOURCES

Agriculture plays an important role in the national, State, and County economies. Ventura County is one of the principal agricultural counties in the State, ranking tenth in income in 1985, with a total income of over 600 million dollars, and ranked seventeenth out of 3,175 counties nationally. This prolific production is made possible by the presence of high quality soils, adequate water, favorable climate and level topography. The combination of these four factors makes Ventura County one of the world's most favored agricultural areas.

According to the Employment Development Department, agricultural employment accounts for approximately 9% of total employment in the County (February, March, April 1982). In addition to that employment is the employment which is "induced" by agriculture through the spending of wages earned by direct and indirect employees of agriculture. This adds 3,226 people to agricultural employment and brings the average total for February, March and April to 19,359 people, or 11% of total Countywide employment.

The following sections discuss the County's farmland inventory, farm characteristics, farmland preservation issues and preservation implementation programs.

1.6.1 FARMLAND INVENTORY

The first step in the development of a program to protect Ventura County's farmlands is the definition, identification and mapping of lands considered to have agricultural value. For inventorying County farmlands, the Important Farmlands Inventory (IFI) system is used. This system is superior to merely identifying Class I and II type soils in that other aspects of the land's productive potential are factored in. The IFI is described below. Figure 1.6 depicts lands identified as "**Prime**" and of "**Statewide**," "**Unique**" and "**local**" importance.

As part of the Rural Development Act of 1962 (USCS Section 2661), the Secretary of Agriculture was directed to conduct a Land Inventory and Monitoring Program which ultimately included an inventory of important farmlands. The Soil Conservation Service was charged with developing criteria which assures a standard for the definition and specific criteria for "prime" farmlands in all parts of the nation. The necessity for a uniformly accepted definition of the term "**prime farmlands**" was made apparent by the growing number of legislative and regulatory references to the term nationwide. An additional purpose of the inventory is "to identify the extent and location of important rural lands needed to produce food, feed, fiber, forage, and oilseed crops" (7 CFR Part 675).

In developing the inventory, State soil conservationists were directed to work with other State representatives in applying the national "prime" definition to their state. In addition, the program required that the SCS identify, again with State and local cooperation, three other classifications of agricultural lands, those lands of "statewide" importance, "unique" importance and "local" importance. In some areas of the country a fifth category, "grazing," is inventoried as well. Grazing is not inventoried in Ventura County as its dollar share of gross production is not significant.

A key factor in applying the IFI criteria to Ventura County is the Ventura County Soil Survey, which was issued in 1970 as part of a previous SCS program. The soil survey serves to identify mapping units which met the "prime" and "statewide" definitions. Generally speaking, "prime" farmlands in California are irrigated soils over 40 inches deep with an available waterholding capacity of four inches or more. They are generally well drained and free from frequent flooding. Soil reaction is neither extremely acid nor strongly akaline and the soils do not have salt or alkali problems. The erosion hazard is only slight and farming is not limited by cobbly surface layers, very slow subsoil permeability or freezing soil temperatures. Farmlands of "statewide" importance are lands other than Prime that have a good combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops.

The criteria is basically like that for "prime" but there is no minimum soil depth limitation and no permeability restriction. They have broader waterholding capacity, soil reaction may be slightly saline and alkali affected, and have a moderate erosion hazard. In Ventura County, lands of "prime" and "statewide" signficance represent 106,900 acres. "Unique" lands are additional lands which produce high value food and fiber crops as listed in the annual report of the Department of Food and Agriculture. In Ventura, this generally means hillside citrus and avocado plantings and represents 20,200 acres Countywide. The criteria for farmlands of "local" importance, as developed by the SCS Field Office in Somis and reviewed by the Ventura County Agricultural Advisory Committee, represents dryfarmed lands and unirrigated "prime" or "statewide" lands. Approximately 11,000 acres fall into this category.

1.6.2 FARM CHARACTERISTICS

The total number of farms in the County in 1982 was 2,064 with the majority of these (66%) owned and operated as individual farms; about 23% were partnerships. About 70% of the farms were less than 50 acres in size and only about 5% were greater than 500.

SIZE OF ALL FARMS REPORTING, 1982

	#	%
Under 10 acres	754	36.5
10 to 49 "	693	33.6
50 to 179 "	351	17.0
180 to 499 "	152	7.4
500 to 999 "	61	3.0
1,000 to 1,999 "	28	1.4
2,000 acres and over	25	1.2
	2,064	100.0

1.6.3 FARMLAND PRESERVATION ISSUES

To preserve the agricultural base of the County, it is necessary to discourage the conversion of farmland to other uses. Declining profitability of agriculture combined with soaring land values for urban and rural uses has induced many farmland owners to sell their properties. The following is, in part, excerpted from the Agricultural Land Protection Program Technical Appendix, 1983.

1.6.3.1 Factors Which Affect Agricultural Economic Viability

The purpose of this section is to discuss the factors which affect agricultural economic viability, and to identify actions the County could take which would have a positive economic impact on agriculture. The costs and returns which determine the profitability of an agricultural operation are complex and highly variable. The cost of land and the improvements required to farm it, interest rates on loans, the crop selected and its price, water costs, the weather, the cultural practices selected and their effect on productivity, the time it takes to bring a crop to maturity, and the farmer's ability, all affect the profitability of a given agricultural operation. This section briefly examines these factors in an attempt to determine what actions the County can take to help retain agriculture as an economically viable industry.

Because of the variability involved, the following factors are not in order of importance.

(1) Cost of Land

The cost of land is a very important cost in agricultural production.

A major contributor to increasing price is the increased demand for developable land and land speculation for non-agricultural purposes. Some factors which make this land viable for agriculture also make it

a desirable location for living and home sites (climate, slope, etc.) A purchaser of land will be willing to pay a higher price if they expect to be permitted to subdivide or develop sometime in the future. A person who wishes to purchase land for farming must pay the inflated market price due to demand and/or speculation on surrounding property.

Another factor influencing land cost is parcel size. Smaller parcels tend to command higher prices per acre and consequently higher taxes. In addition, a larger parcel allows more efficient use of machinery and management, greater flexibility in terms of crop to be grown and a larger margin of safety in terms of return on the crop.

Cost of land is an economic factor which can be beneficially affected by County action. Perhaps the central issue in retaining the economic position of agriculture involves permanence in land use. By having a long-term commitment to agriculture, the County can adopt land use regulations which will protect agriculture from conversion to non-agricultural uses, over subdivision and adjacent incompatible uses, and assist in retaining its economic viability.

The costs associated with speculation can be avoided by reducing the possibilities of housing subdivisions and by limiting the number of permitted home sites.

In terms of property taxes, the County can continue its support of Land Conservation Act contracts, explore Open Space and Conservation easements and initiate and support farm tax-break legislation at the State level.

To avoid the costs associated with undersized parcels, the County can ensure parcel sizes which retain economic efficiency and ensure convertibility of crops.

(2) Cost of Water

The cost of water is another factor affecting agricultural economic viability. With rising energy costs, this factor will become even more important, and farmers may have to change water application techniques or crop types in order to use less water in the future.

The agricultural sector consumes 86% of the groundwater used in the County. Irrigated agriculture is dependent on water to survive and, in this sense, the County has the opportunity to take some positive steps to ensure water availability.

The County is playing an active role in attempting to solve its water quantity and quality problems. The 1978 and 1982 Water Quality Management "208" Plans recognized these problems and recommend measures to alleviate them. Section 1.3 discusses water resources, and the Public Facilities and Services Appendix discusses water distribution.

(3) Cost of Material and Equipment

The cost of materials and equipment is a function of the overall economy. Some examples of material and equipment include pesticides, fertilizers, tractors, tillage and planting implements, irrigation pipe, pick-up trucks and harvesting equipment.

Maintenance and operating costs of equipment are also a function of the overall economy. Implicit in operating costs are energy costs. The cost of energy is rising and the farmer is feeling the effects. Most energy used on farms goes to fertilizer manufacture, distribution and application, tillage, and pumping of irrigation water. As farms become more mechanized, they become more energy intensive.

There are several opportunities available to reduce energy consumption in agriculture. These include: 1) maximum extension and use of technology to conserve fertilizer and crop protection chemicals, 2) increasing farm size to secure more efficient use of machinery, and 3) reducing the amount of processing of raw products.

By continuing its commitment to agriculture and by limiting land divisions, the County can encourage the efficient use of energy associated with large parcels, thereby reducing the cost to the farmer for material and equipment use and traveling between parcels.

(4) Cost of Labor

Agricultural labor has traditionally been seasonal and less skilled. However, increased mechanization of agricultural production has tended to cause a shift from the intermittent seasonal type of employment to year-round farm work (The Future of California's Agriculture 1974-2000, Commission for Economic Development). Farm machine maintenance and operation generally require a degree of skill not necessary for hand labor and harvesting, and the workers command a higher wage because of their skill. Although this increases the cost to the farmer, it also increases efficiency.

It does not appear that there are any actions the County can take that would influence the cost of labor.

(5) Cost of Processing and Distribution

The costs associated with processing and distribution of crops include energy and labor costs. These are determined by the overall economy. Processing is heavily dependent on energy, and as energy prices increase, so does the cost of processing.

The County has the opportunity to prevent that occurrence by retaining its commitment to agriculture and by preserving agricultural areas. The County could also ensure the establishment, through land use policies, of agricultural support services in agricultural areas.

(6) Interest Rates

Because agriculture is a capital intensive industry, it is severely affected by interest rates. Because interest rates are a function of the overall economy, there are no actions the County can take to mitigate their effect.

(7) Consumer Demand

Agricultural economic viability is obviously affected by consumer demand because, quite simply, the farmer isn't able to sell his product if people do not find it desirable.

Demand is determined by a number of factors. Among these are type of crop, amount and type of marketing, and price. Demand tends to be relatively stable, and price variations are caused by shifts in total supply.

This factor is outside of County influence.

(8) Natural Factors

Other factors outside of County control are natural ones. Individual farmers and ther regional agricultural industry can be affected by factors such as weather and pests. Obviously these cannot be directly controlled by the County, but there are on-going programs, conducted by the Agricultural Commisssioner and the Ventura County

Agricultural Extension Office. The County could have a minor, negative impact on the cost of pest management if further regulations are adopted by such agencies as the Air Pollution Control District or Environmental Health Division governing the use of pesticides.

(9) Housing and Its Effect on Agriculture

Historically, Ventura County has always permitted, as a matter of right, a single-family dwelling on any legally created parcel zoned for agricultural purposes. The reason for this is to allow a farmer to build a house for his/her family or farm manager. The agricultural zones also allow, by Conditional Use Permit, the construction of farm laborer or caretaker dwellings in addition to the principal single-family dwelling. In actual practice, however, not all parcels in the agricultural zones have dwellings on them, although they all have the right to have at least one.

Because of this ability to build a single-family home on any legally created parcel, some parcels have been created in agricultural zones primarily for expensive home sites. Although these parcels may grow agricultural products (typically citrus or avocado orchards), the agricultural use is not the sole source of income and is principally done to offset some of the cost of holding the land. These parcels are commonly known as hobby farms or "ranchettes", and are generally within the 5 to 20 acre size range.

Ranchette type development can have a significant effect on commercial agricultural areas. First, as the number of houses in agricultural areas increase, the need for urban type services increases (water, roads, electricity, gas, police and fire protection), altering the character of the area and creating growth inducement for non-agricultural land uses. Secondly, these additional dwellings can cause cumulative environmental impacts on agricultural areas; loss of agricultural land, grading impacts, increased drainage, flooding and sedimentation, increased traffic, and increased vandalism and citizen complaints. Thirdly, owners of ranchettes are typically not full-time farmers, and may not use best agricultural management practices. This can cause problems for adjacent commercial agricultural operations (pests, disease, weeds, etc.). Lastly, ranchette type of development increases land costs due to speculation for non-agricultural purposes; decreasing the commercial farmer's incentive to continue farming and decreasing the overall economic viability of commercial agriculture.

Assuming a land cost of $20,000 per acre, a ten acre parcel would cost $200,000. This is within the marketable range of expensive home sites considering the real estate market of Southern California and the land's ability to grow crops which partially offset the cost of holding the land. However, a 40 acre parcel, even assuming a lower per acre cost of $15,000, would cost $600,000. Although some people may want to invest that amount of money into an expensive home site, the likelihood (compared to a ten acre parcel) is much less.

Through the General Plan and Zoning Ordinance Code, the County can establish minimum parcel sizes which can limit the development of ranchettes in agricultural areas. In addition to the problem posed by development of ranchettes, conflicts are created when residential development, even at rural densities, encroaches into and abuts agricultural areas. This encroachment is a double-edged sword simultaneously bringing increased land values and residential versus agricultural conflicts. These conflicts involve vandalism, flooding and siltation for farmers and noise, dust and odors for their neighbors who then seek to curtail farming operations.

Buffer standards including lot size, setback and fencing for residences, and spray buffers for farms, can reduce these inherent incompatibilities.

(10) Congestion on Farm-to-Market Roads

Traffic congestion on farm roads has an adverse effect on agricultural operations (Hueneme Road is an example). Growers are often precluded from using the road during commuting hours. Accidents between urban traffic and agricultural implements have occurred and are reflected in increased costs. Deposition of mud on roads by farm vehicles has been cited as a cause of accidents.

Because of a lack of packing sheds in the Las Posas Area, orchard owners or packing companies are needing to increase the number of very expensive haul trucks. Stop signs and intervening residential buildout between points of production and processing have increased haul truck turnaround time between orchard and processing plants. Field workers and pickers must either be idled because the haul truck cannot make the circuit or more trucks must be added (trucks are a costly item, some at $50,000+ each).

1.6.3.2 The Effect of Parcel Sizes on Agriculture

As mentioned previously, parcel sizes can affect the economic viability of agriculture and the County can, through land use regulations and zoning, establish minimum parcel size limitations in support of commercial agriculture. In addressing this issue, the question arises; "What is an agriculturally viable parcel size?" Put another way; "What parcel size(s) is/are needed for the long term maintenance of agriculture?"

The "Technical Appendix Supplement GPA 82-3 - Agricultural Economics Issue Paper," studied this issue and identified several factors which point to an appropriate minimum parcel size.

From this study, it would appear that 40 acres should be the minimum parcel size for irrigated agricultural lands, 80 acres should be the minimum parcel size for dry land farming, and 80 acres and greater (based on carrying capacity) should be the minimum parcel sizes for dry land grazing. These minimum acreages are supported by the following factors:

(1) Historically, almost all land under LCA contract (71% of all agricultural land in Ventura County) has been zoned A-E, 40 acre minimum parcel size.

(2) Land which can support a variety of agricultural crops (Irrigated Variculture - "Prime" and "Statewide Significance" classed lands), should have at least 40 acres to ensure long-term agricultural efficiency and flexibility.

Small parcels reduce efficiency due to the inconvenience, expense and time involved in moving workers and equipment from parcel to parcel, higher per-acre agricultural contractor fees (pest control, picking/hauling, etc.), and increased potential for conflicts with adjacent land uses (longer boundaries per acre of usable land). To verify the validity of a 40 acre minimum parcel size, a survey of Oxnard Plain farmers was conducted by the Ventura County Agricultural Advisor in 1982.

Although there was no absolute minimum parcel size identified in this survey, 40 acre parcels appear to be the smallest unit the majority of farmers are comfortable farming. Even at that size, 23% (5 farmers) of the farmers felt that the parcel needs to be larger in order to achieve farming efficiency.

(3) Farms growing tree crops would need substantially more than 28 acres to earn a median-family income (1983). The per acre profit margin of orchards dictates that a larger parcel is needed to produce an adequate family income.

(4) Parcel sizes below 40 acres in size may facilitate ranchette type development which may adversely impact commercial agricultural areas by extending urban type services, creating cumulatively adverse environmental impacts and increasing land speculation.

(5) The LCA Guidelines, which were amended in 1983 based on a study conducted by the Agricultural Advisory Committee, establish a minimum preserve size for dry land farming of 80 acres and a minimum preserve size for dry land grazing of 80 acres or greater depending on the land's ability to support 20 head of cattle. These Guidelines are considered by the Agriculture Advisory Committee to be still valid.

1.6.4 IMPLEMENTATION PROGRAMS

The County has adopted various programs designed to preserve agriculture. Agricultural preservation has been integrated into overall land use planning strategy and consequently is a reciprocal beneficiary of many interagency regional land use planning and resource conservation programs. The principal interagency programs are: the **Guidelines for Orderly Development, Greenbelt Agreements** and the various regional water programs (see Land Use Chapter and Sec. 1.3 Water Resources). Specific County agricultural preservation programs are:

Agriculture Land Use Designation - The Land Use Chapter establishes an Agriculture designation for lands identified in the Important Farmlands Inventory (with some exceptions, see Land Use Chapter). This designation establishes a forty acre minimum parcel size and subjects all parcels to the Agricultural Exclusive (A-E) zone.

Land Conservation Act Program - In 1966, the State adopted enabling legislation to enhance the preservation of agricultural lands. Known as the Land Conservation Act (LCA) or **Williamson Act**, the law allows farmers to enter into a long-term contract (minimum of 10 years) to keep their land in exclusive agricultural use in exchange for a reduced tax assessment based on the agricultural value of the property. Ventura County entered the program in 1969, and as of June 1982 had 839 contract holders representing 166,886 acres of crop and grazing lands. In 1986 there were 165,996 acres under LCA Contract. This voluntary program has historically been the backbone of agricultural preservation efforts in the County and should be supported and encouraged to expand in to all areas designated "Agriculture."

Although revisions and modifications have been made to the County's LCA program from time to time, there are a number of amendments which should be undertaken. Specifically, the existing LCA contract should be overhauled to make it consistent with the new agricultural protection policies. The Board adopted program resolutions and "Decision-making Guidelines" used by the Board's appointed Agricultural Advisory Committee in managing the LCA program also need attention to remove ambiguities and inconsistencies.

Another LCA-related action for investigation is the development by the Advisory Committee, with County staff assistance, of a comprehensive annual report on the status of agricultural lands in the County. This is envisioned as a cooperative effort by the County, the Agricultural Commissioner's Office, the Farm Advisor, Farm Bureau, Soil Conservation Service and other farming interests on the full status of County agriculture including an agricultural land use conversion update. These entities already produce annual reports, so the one being proposed would attempt to integrate them into one comprehensive report. Under the provisions of State legislation (AB 966), the County is required to report annually to the State on the yearly changes in agricultural lands, so the concept of a comprehensive Annual Report would be complementary to the preparation of this required information.

It should be noted that several land trust organizations exist which would likely be willing to accept donatoins of land or easements for

preservation purposes. Two such agencies are the Ventura Land Conservancy and the American Farmland Trust.

1.6.5 TIMBERLAND

The "1987 California General Plan Guidelines" state:

"The Timberland Productivity Act of 1982 requires all counties and cities with productive private timberland to establish 'Timberland Production Zones,' called TPZs, for the purpose of discouraging the premature conversion of timberland to other uses (Government Code Sections 51100 et seq.). The General Plan must reflect the distribution of existing TPZ zoning and have a land use category that provides for timber production. TPZ zoning can also be used to implement the conservation element by husbanding timber resources.

Patterned after the Williamson Act, TPZs are rolling ten-year contracts providing preferential tax assessments to qualified timberlands. Under this program, assessments on timber are based on the value of the timber at the time of harvest, rather than an annual assessment on the market value of standing timber. Assessment of zoned timberland is based on a statutory value of land that is related to site capability, and is annually indexed to changes in the periodic immediate harvest value."

The State Government Code offers the following definition:

"Timber" means trees of any species maintained for eventual harvest for forest products purposes, whether planted or of natural growth, standing or down, on privately or publicly owned land, including Christmas trees, but does not mean nursery stock.

Ventura County does not contain land which produces timber commercially for eventual use as lumber or pulp; however, six Christmas tree farms are zoned Timberland Preserve (T-P) pursuant to the provisions of the Timberland Preserve Zone of the County Zoning Ordinance. The "T-P" zone is compatible with the **Open Space**, Agriculture and Rural land use designations (of the Land Use Chapter). Five of these six properties are located in the Ojai Valley area and one in the Piru area. Together they total approximately 94 acres. These parcels are identified by the following Assessor's Parcel Numbers: 30-23-17, 24-08-15 and 16, 32-16-7, 35-09-12, 18-17-38 and 55-18-12. All are privately owned.

1.6.6 CONCLUSIONS

Agriculture is Ventura County's number one industry, and it is also very important both Statewide and nationally.

There are many costs associated with farming which determine profit for the farmer. Because many factors are outside of County control, the County cannot ensure economic viability. The County does, however, have the opportunity to take some actions which would indirectly support agricultural economic viability.

The County can adopt or support water **policies**, regulations and **programs** which would protect water quantity and quality. Examples include: encourage the use of reclaimed water for agriculture, water conservation measures, support of the Fox Canyon Groundwater Management Agency, Well Ordinance, Abandoned Well Study, Saticoy Diversion and Pumping Trough Pipeline, and Hillside Erosion Control Ordinance.

The County can demonstrate its long-term commitment to agriculture through land use planning policies and regulations. The adoption of planning policies and regulations which identify and protect existing agricultural land would ensure the continued availability of these lands for agricultural uses. By protecting agricultural lands, the County would save farmers the costs of relocation and the costs associated with urban

encroachment. By establishing buffer standards for residential uses which abut agricultural areas conflicts between these uses can be mitigated.

By establishing sufficiently large enough minimum parcel sizes, the County would support agricultural operating efficiency and the ability to vary crop types, and discourage ranchette type development and land speculation for non-agricultural purposes. The minimum parcel size for irrigated farms should be at least 40 acres, and should be at least 80 acres for non-irrigated farms and grazing.

Long range circulation plans can take measures to reduce traffic conflicts with agricultural vehicles. Planning to reduce traffic on primary farm roads and provision of over-crossings, frontage roads and extra lanes can help.

Water resource planning, land use planning policies and regulations, and maintenance of minimum parcel sizes are the most positive actions the County could take to support long-term economic viability of commercial agriculture and the perservation of agricultural land.

REFERENCES CONSULTED

University of California Farm Advisor, Ventura County Agriculture at a Glance, 1986

Ventura County Planning Division, Ventura County General Plan, Conservation and Open Space Elements, 1986, with General Plan Amendment 82-3 Agri- cultural Lands Protection Program Technical Appendix.

Ventura County Agricultural Commissioner, Ventura County Agricultural Crop Report, 1986

Figure 1.6.1

TOP CROPS IN VENTURA COUNTY, 1987

Crops	Bearing Acres	Value in Dollars
Lemons	21,669	162,715,000
Strawberries	3,468	88,408,000
Celery	9,615	79,679,000
Poultry & Dairy Products	-	59,909,000
Valencia Oranges	14,535	45,097,000
Misc. Vegetables	3,780	31,880,000
Ornamentals (Nursery)	-	27,332,000
Nursery Stock	-	25,985,000
Avocados	16,303	20,947,000
Cut Flowers	-	20,783,000
Lettuce	6,390	20,333,000
Seed	1,850	19,756,000
Broccoli	4,985	9,798,000
Spinach	3,364	9,188,000
Tomatoes	3,327	6,206,000
Cabbage	2,004	5,490,000
Peppers	1,980	4,520,000
Green Lima Beans	5,045	3,612,000
Parsley	2,727	3,474,000
Grapefruit	836	3,350,000
Cattle, Hogs, Sheep	-	3,166,000
Navel Oranges	1,328	3,010,000
Cauliflower	1,035	2,813,000
Fruit and Nut Crops	59,831	2,190,000
Sweet Corn	1,531	1,997,000
Cucumbers	820	1,590,000

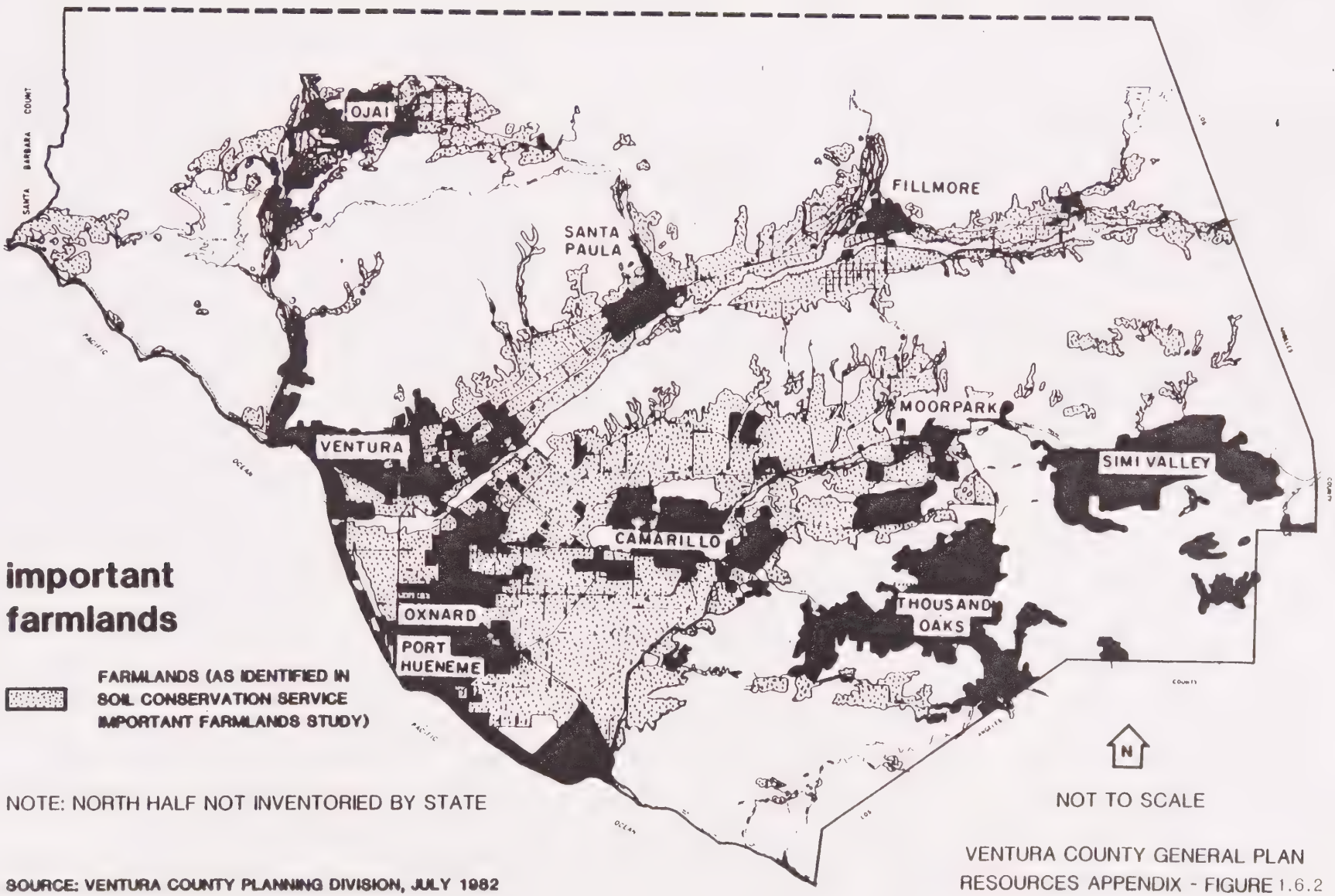
RECAPITULATION

Crops	Bearing Acres	Value in Dollars
Fruit and Nut Crops	59,076	324,304,000
Vegetable Crops	44,985	181,369,000
Livestock, Poultry, and Dairy	-	63,955,000
Nursery Stock, Christmas Trees, Sod	6,500	56,568,000
Field Crops	7,964	21,319,000
Cut Flowers	-	20,783,000
Apiary Products	-	885,000

ACREAGE

117,526 Bearing Acres
757 Non-Bearing Acres, Tree Crops
118,283 Total Acreage (Crops)*
95,284 Total Acreage (Land in Crops)

*Crop acres include approximately 26,626 acres planted to more than one crop each year.
Source: U. C. Agricultural Advisor



NOTE: NORTH HALF NOT INVENTORIED BY STATE

NOT TO SCALE

SOURCE: VENTURA COUNTY PLANNING DIVISION, JULY 1982

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX - FIGURE 1.6.2

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1.7 SCENIC RESOURCES

The scenic resources of Ventura County are of considerable value both in providing a pleasurable environment to local citizens and in stimulating tourism. Aesthetic surroundings are a primary determinant in quality-of-life considerations. Ventura County contains a wealth of scenic resources. From the coastline to the forested mountains of the north, the County contains features which continue to attract visitors and provide pleasure to residents. Preservation of these resources, and visual access to them, is a goal of the County.

The following Section 1.7.1 discusses general inventorying of scenic resources and the program the County has employed to inventory and protect County resources. Section 1.7.2 discusses scenic highways including the County's and State's scenic highways programs.

1.7.1 SCENIC RESOURCE INVENTORY

Inventorying and assessing visual resources is not an exact science, as perception of beauty is highly subjective. The County's natural visual resources are generally composed of the varied topography, exposed rock formations, varied and unique coastline, vegetation, and waterways. The man-made environment of buildings, parks, harbors, etc., can contribute to, or degrade, scenic resource quality.

A view is generally composed of (1) foreground with attention to detail, at less than one-half mile; (2) middleground, with much less detail but attention to vegetation changes from one-half mile to 3 to 5 miles; and (3) background, with no detail and attention to large land forms at distances greater than 3-5 miles away. Conservation of visual quality activities and characteristics in the foreground zone is most important. The viewing location can also influence perception of visual quality.

The U.S. Forest Service is a leading proponent of visual resource analysis and has evaluated the Los Padres National Forest for visual quality and sensitivity. The Forest Service's Visual Management System serves as a model of visual resource analysis technique.

1.7.1.1 County Scenic Resource Program

In inventorying and assessing the many scenic resources in the County, several alternatives were carefully evaluated. The resources considered worthy of protection and preservation included unique topographic features, mountains, rivers and creeks, riparian habitats, coastal areas, lakes and **viewsheds.** Also taken into consideration was whether the scenic resources were held in value by the public. Because of time and budget constraints, it was not possible to protect all scenic resources in the County at the time the Scenic Resource Protection Zone was created.

After careful evaluation, lakes and their viewsheds emerged as areas worthy of consideration. These areas matched the criteria developed to determine lands in need of protection, and they are geographically compact. These areas also contain sensitive habitats where many oaks, alders, maple trees and many other plants grow and where wildlife flourishes. Lakes are usually surrounded by steep slopes, which makes them sensitive to the forces of nature if greatly disturbed. Lakes are also thought of as central foci for people who enjoy these areas as recreational and educational areas. As shown on the **scenic resources map**, the lakes are distributed throughout the County, making them accessible to a large number of people.

Many criteria were used to determine eligibility of individual lakes for inclusion in a **scenic resource area**. The criteria used are shown on the Scenic Resource Area Criteria Matrix Figure 1.7.1. Based on these criteria, four of the seven lakes in Ventura County matched the established criteria. The four lakes are Lakes Casitas, Matilija, Piru and Sherwood.

The lakes not included in the Scenic Resources Protection Plan are Bard Lake (Wood Ranch Reservoir), McGrath Lake and Lake Eleanor. Bard Lake is strictly a water reservoir, McGrath Lake is adequately protected under the Local Coastal Plan and is largely within the City of Oxnard, and Lake Eleanor is within the City of Thousand Oaks.

The criteria used, and the justifications for their use, are as follows:

- Accessibility by Road - allows the public visual and physical access.

- Absence of Major Development - refers to the absence of large residential developments. An absence of development makes the area visually more pleasing as a scenic resource area.

- Recreational Use - refers to the accessibility of the area to the public or to private owners for recreational purposes.

- Steep Slopes - means that more than 85% of the area has steep slopes. While steep slopes are difficult to develop, they are thought to have greater scenic value.

- Watershed Areas - refers to the importance of the land as a water drainage areas. Watershed areas are important for the replenishment of domestic water supply and for maintaining groundwater levels.

- Dense Vegetation Cover - refers to the presence of dense vegeta-tion of all types on the slopes. Vegetation is necessary to hold soil in place, particularly on steep slopes.

- Stands of Trees - refers to the presence of many species of mature trees. Trees are visually pleasing and are most in need of protection.

- Abundance of Wildlife - refers to the presence of wildlife. The protection of trees and other vegetation will help to protect wildlife in the scenic areas.

- Open Space Designation - refers to the current land use designation of the major part of the area.

- Percent of Land in National Forest or other Government Ownership - refers to the approximate percentage of land that is currently not in private ownership.

In addition to lake related scenic resource areas, there are scenic resource areas that are identified in some area plans. The criteria used in determining them and the policies involved varies from area to area. Therefore, the reader is directed to review the appropriate Area Plan.

1.7.1.2 Implementation

The implementation of scenic resource protection is through an Overlay Zone, which is designed to preserve, protect and enhance the County's scenic resources through the regulation of uses that may adversely affect these resources. The provisions of the overlay zone are intended to apply to all areas of the County designated **Scenic Resources Areas** on the **Resource Protection Map** of the Resources Chapter of the General Plan Goals, Policies and Programs. Scenic Resource Areas are defined as: 1) Areas as may be identified by and in an Area Plan and 2) the area encompassing lakes and the viewshed extending from the lakes to the highest ridgeline surrounding the lakes. The County lakes included are: Lake Casitas, Lake Matilija, Lake Piru and Lake Sherwood. Scenic Resource Areas are depicted on the Resource Protection Map.

1.7.2 SCENIC HIGHWAYS

The following discusses development of the Scenic Highways Map (Fig. 1.7.2) and potential courses of action for implementing scenic highway protection.

1.7.2.1 Philosophy

Traditionally, scenic highways have been pleasure drives through the idyllic countryside. With urbanization encroaching on the countryside, the traditional notion of scenic highways is being revised.

The traditional scenic highway was used primarily for recreational purposes, but with commuting being such a large part of our lives, perhaps scenic highways should be planned around commuting patterns--around fast, straight, super highways as opposed to slow, meandering country roads. If scenic highways are to be enjoyed, should they not be enjoyed by the daily masses of commuters as well as the Sunday driver or vacationer?

The viewscapes from most of our scenic highways are rural in nature despite the fact that most people live in urban environments. Probably because of the general unattractiveness of our urban areas, we often conclude that scenic highways do not legitimately belong in the cities. This is unfortunate because there are genuinely attractive urban settings which could be rightfully included in a scenic highway system. The development of scenic corridors within urban areas is generally more difficult to achieve than in rural areas.

There are always portions of our developed areas which are unattractive, but they need not remain that way. Scenic highway programs are almost universally designed to preserve and protect the scenic qualities within a corridor; they seldom direct their attention to the creation or enhancement of scenic values. Instead of preserving existing scenic qualities, scenic highways programs could in effect become a coordinated series of roadside beautification projects intended to create scenic qualities.

1.7.2.2 Selection of Scenic Routes

The philosophy section provides a basis for more definitive criteria which can assist in the selection of eligible scenic highways. The criteria below were used in selecting the prospective scenic highway routes depicted on the Scenic Highways Map.

These criteria are used as a guide only, and are in no way intended to be the final definition of what is "scenic." Included in the listing are criteria suggested by the State Division of Highways. Ultimately, the determination of what is scenic rests with the local jurisdiction.

State Suggested Selection Criteria

- The scenic corridor through which the highway passes should have consistent scenic, historic or aesthetic value during all seasons.

- Consideration should be given those highways or routes which are:

  - State or jurisdictional entry routes;
  - Predominately utilized for recreation or vacation travel;
  - Utilized for one-day sightseeing or study trips;
  - A part of an integrated, or semi-integrated scenic route system that traverses varied scenic corridors for longer trips, and/or
  - Through areas of extraordinary scenic value;
  - Typical or demonstrative of varied scenic factors available within the jurisdiction.

- If possible, all principal landscape and topographical type areas should be represented in the system.

- Routes of historic significance which connect places of interest should be considered even though the route is of marginal scenic value.

- The number of times a route has been suggested as a scenic highway in other plans and studies.

- The degree to which a route can be integrated into a system of "loops" or continuous scenic drives.

- Whether a route connects the scenic highway systems of adjoining jurisdictions.

- The general attractiveness of the route, including the variety and diversity of its viewscape.

- The extent to which the route supports other General Plan elements or plans, such as the open space, conservation, recreation, circulation, bicycle, and parks plans.

- The extent to which the route traverses representative samples of County's various environs, whether natural or man-made.

- The amount of traffic on the route.

- The degree to which the route was thought to be a leisurely drive.

- The attractiveness of the highway as viewed from other areas of the corridor.

Figure 1.7.2 depicts the County's eligible and designated Scenic Highways. This system of routes was recommended by the Ventura County Association of Governments General Plan Advisory Committee in 1973, with the aid of the above criteria. The State Scenic Highways, both "Designated" and "Eligible" are as depicted on the State Master Plan of Highways Eligible for Official Scenic Highway Designation.

1.7.2.3 Inventory of Scenic Corridor Features

Once a **scenic route** has been identified, and the route's purpose or character defined, an inventory should be made of the pertinent features within the viewshed. These features may include "assets" (broad vistas, unique architecture, historic sites, etc.). Both assets and liabilities must be inventoried because both must be considered in the eventual development of the route.

Once the assets and liabilities of a route have been inventoried, the next step is to determine what action is to be taken relative to each feature. Where a positive feature exists the appropriate action might be to preserve it or maintain it. Where certain desired features (rest areas, vista points, etc.) are absent, an entity may decide to create or develop them, if the features exist, but are inadequate, the action to be taken might be the enhancement of these features. For the liabilities inventoried, alleviation measures should be discussed.

1.7.2.4 Scenic Road Design and Construction

Whenever scenic routes are improved, or designated "future" scenic routes are constructed, the following standards should be followed.

These standards are taken from State publication, The Scenic Route, and are listed below:

- The establishment of general alignment and grade to fit the scenic character of the area to be traversed.
  - Curvilinear alignments should be stressed.
  - The highway profile should be rolled to fit the topography.
- The reduction to a minimum of all roadway cut and fill scars.
  - Elimination of cuts or fills wherever possible. This may be accomplished through the use of tunnels and/or bridges when necessary.
  - Flatten or contour all grades and landscape slopes where they cannot be eliminated.
  - The provision of erosion control standards.
- Acquisition of wider rights of way or scenic easements should be encouraged where (1) Access control is necessary; and (2) the elimination of outdoor advertising and unsightly development through zoning should be required.
- The provision of vegetation screens for the purpose of hiding objectionable views.
- Selective clearing of vegetation to open up or provide views of desirable scenic qualities.
- The location of and/or design of structures with an intent to achieve beauty of aesthetic qualities.
- The provision of roadside parking areas and lookouts wherever scenic vistas are warranted.

1.7.2.5 County Scenic Highway Areas

The first step in effecting protection of the scenic qualities of a route is the identification of the **scenic corridor.** Scenic Corridors are defined as: That visible area outside the highway right-of-way, that can generally be defined as the "view from the road." Scenic Corridor (highway areas) apply to designated County scenic highways and the viewshed corridor one-half mile on either side of the highway.

Depiction of a **Scenic Highway Area** on the **Resource Protection Map** provides special protection for a scenic corridor. Scenic Highway Area is defined as: The area encompassing the scenic corridor of a scenic route which has been identified as needing special protection. Scenic Highway Areas are depicted on the Resource Protection Map of the General Plan Goals, Policies and Programs.

The purpose of identifying Scenic Highway Areas is to protect and preserve scenic resources within the viewshed of scenic highways. The Scenic Highway Protection Overlay Zone covers all Scenic Highway Areas and the following policies apply:

(1) All development shall be evaluated by application for a Planned Development permit.

(2) No protected tree shall be removed, damaged, or destroyed without a tree permit.

(3) Revegetation shall incorporate the use of native plants indigenous to the area.

(4) No offsite signs will be allowed.

(5) No new use shall be inaugurated which could significantly contribute to the degradation or destruction of the scenic resource.

Federally owned land shall not be subject to the Scenic Highway Protection Overlay Zone and need not obtain any permits as specified under (1) or (2) above. To the extent possible, the agencies responsible for the administration of land use activities on federally owned land should consider Policies 3, 4 and 5 above in the planning and administration of new land uses within scenic highway areas.

1.7.2.6 State Scenic Highways Program

The State has adopted legislation (Division 1, Chapter 2, Article 2.5 of the Streets and Highways Code) governing the application of the designation "State Scenic Highway." In order to receive that designation, the local jurisdiction must follow the following process. County Scenic Highways can achieve State recognition by following the same process, save for appearing on the Master Plan.

(1) Master Plan of State Highways

Before a route can be designated as an official State Scenic Highway, it must be included in The Master Plan of State Highways Eligible for Official Scenic Highway Designation. New routes can only be added to the Master Plan by legislative action. Any proposed route should be reviewed by CALTRANS staff to the Departmental Transportation Advisory Committee and the committee for scenic potential prior to its inclusion in the Master Plan by the Legislature. As a general policy, short or segmented routes are not recommended for inclusion in the Master Plan. If several routes within a jursidiction are being considered for inclusion in the Master Plan, they can be incorporated by means of a single piece of legislation.

(2) Resolution of Intent

The local jurisdiction(s) having jurisdiction over lands adjacent to the eligible route must provide the District Director to Transportation with a resolution of intent to initiate the designation process. The resolution of intent must be accompanied by:

- A contour map of the suggested scenic corridor boundaries and route limits. (The **scenic corridor** is defined as the area of land generally adjacent to and visible from the highway.)
- A brief description of the roadway with respect to its surrounding area.
- An inventory of elements that make the route scenic, i.e., facts of historical significance, vistas, topography, stands of trees, rock outcrops, etc.

(3) Review by Departmental Transportation Advisory Committee

Following the resolution of intent, CALTRANS staff to the Departmental Transportation Advisory Committee (DTAC) will review the proposed scenic route to determine if the route has reasonable potential for official designation and present a staff recommendation to DTAC.

The local jurisdiction will be notified of the meeting and may attend at their discretion.

(4) Protection Program

After receiving DTAC's approval to proceed, the local jurisdiction prepares and adopts a program to protect and enhance the scenic corridor.

(5) Designation

If the protection program is found to be satisfactory by DTAC, the Director of the Department of Transportation, upon DTAC's recommendation, will officially designate the route as a scenic highway.

The procedure for achieving official designation of scenic highways includes the requirement that the local jurisdiction(s) prepare and adopt a program to protect and enhance the appearance of the scenic corridor. The elements of that program are described as follows:

o Scenic Highway Protection Program

The minimum requirements under Section 261 of the Streets and Highways Code which must be met include, but are not limited to:

- Regulation of land use and density of development (i.e., general plan classifications with specific density restrictions and types of allowable land uses);
- Detailed land and site planning (i.e., establishment of a permit or design review authority and defined regulations for the review of proposed developments and projects);
- Control of outdoor advertising (i.e., prohibition of off-premise signs in rural settings, control of onsite advertising structures, with allowances for traveler information);
- Careful attention to and control of earthmoving and landscaping (i.e., adoption of a grading ordinance, grading permit requirements, approval by a permit or design review authority, landscaping and vegetation requirements); and
- The design and appearance of structures and equipment (i.e., design review authority and regulations).

The protection measures, which are to be in the form of ordinances or included in the general or specific plans, shall apply to the area of land within the scenic corridor boundaries and route limits. Assistance in establishing the corridor boundaries can be requested from the CALTRANS district scenic highway coordinator.

These ordinances can be new or existing, but must meet the five criteria in Section 261 of Streets and Highways Code as listed above. The protection program will vary from one jurisdiction to another, depending upon the geographic setting and/or the prevailing land uses in the scenic corridor. In general, the degree of controls should be at the level and degree of detail necessary to protect the scenic appearance of the corridor.

o Public Participation

The scenic highway protection program should be prepared in cooperation with local citizens' committees, affected property owners, environmental groups, and anyone else who might be impacted or interested in the proposed designation. These groups should be involved at the earliest possible date to afford ample time for review and comment before official action is taken.

Notification by mail to affected property owners is strongly suggested, particularly in areas with a significant number of vacation or second homes. Effective citizen participation will result in a protection program which generally meets local desires and will reduce the probability of last minute controversy.

o Proposed Realignments or Route Improvements

The local jurisdiction(s) should contact the CALTRANS District Office in their area for information on proposed route improvements or realignments to determine any effects on any eligible route's scenic

qualities. Eligibility may be transferred to the new route automatically, or legislation may be required for its inclusion in the Master Plan of State Highways Eligible for Official Scenic Highway Designation. This determination will be based on the nature and the extent of the realignment, and will be made in cooperation with CALTRANS staff to the Departmental Transportation Advisory Committee and the CALTRANS District Office.

o Format and Submission of Request for Designation

Following the adoption of the scenic highway protection program, the local jurisdiction must request that the route be designated as an official State Scenic Highway. The request, addressed to the Chair of the Departmental Transportation Advisory Committee, must include:

- A cover letter from the local jurisdiction(s) requesting official designation;
- A contour map which defines the scenic corridor boundaries and route limits;
- An inventory of elements that qualify the route as scenic (as submitted with the resolution of intent to intiate the designation process);
- A brief description of the process employed for public participation;
- A description of proposed realignments or route improvements and further actions, if any, that need to be taken on the transfer of eligibility; and
- An annotated summary report of the adopted ordinances that apply to the area of land within the scenic corridor boundaries and route limits.

The request will be reviewed by the CALTRANS district scenic highway coordinator and CALTRANS staff assigned to the Department of Transportation Advisory Committee for compliance with statutes and these guidelines.

Upon receipt of the written request for designation, the Department of Transportation Advisory Committee will conduct a review of the scenic highway protection program. If the protection program is found to be adequate, the Departmental Transportation Advisory Committee will make a recommendation to the Director of Transportation to designate the route as an official State Scenic Highway.

The Director of Transportation will then designate the highway as an official State Scenic Highway and this will be so indicated in departmental publications or maps which are issued to the public. The department will place and maintain appropriate signs along the scenic highway.

1.7.3 CONCLUSIONS

Ventura County contains scenic resources which could potentially be degraded by development. In addition, the view from scenic vistas or highways could be obstructed by development. Scenic areas and highways should be protected by policies which prohibit degradation of scenic resources. Development should be required to incorporate measures to enhance or preserve scenic characteristics. To facilitate implementation of these goals, a specific land use designation and/or zone should identify those areas deserving special protection and the zoning standards which would apply to those areas.

REFERENCES CONSULTED

California Department of Transportation, Draft Guidelines for the Official Designation of State Scenic Highways, 1987.

Ventura County Planning Division, Ventura County General Plan, Conservation and Open Space Elements, 1986 with North Half Technical Appendix, 1986.

Ventura County Planning Division, Ventura County Scenic Highways Element, 1974.

FIGURE 1.7.1

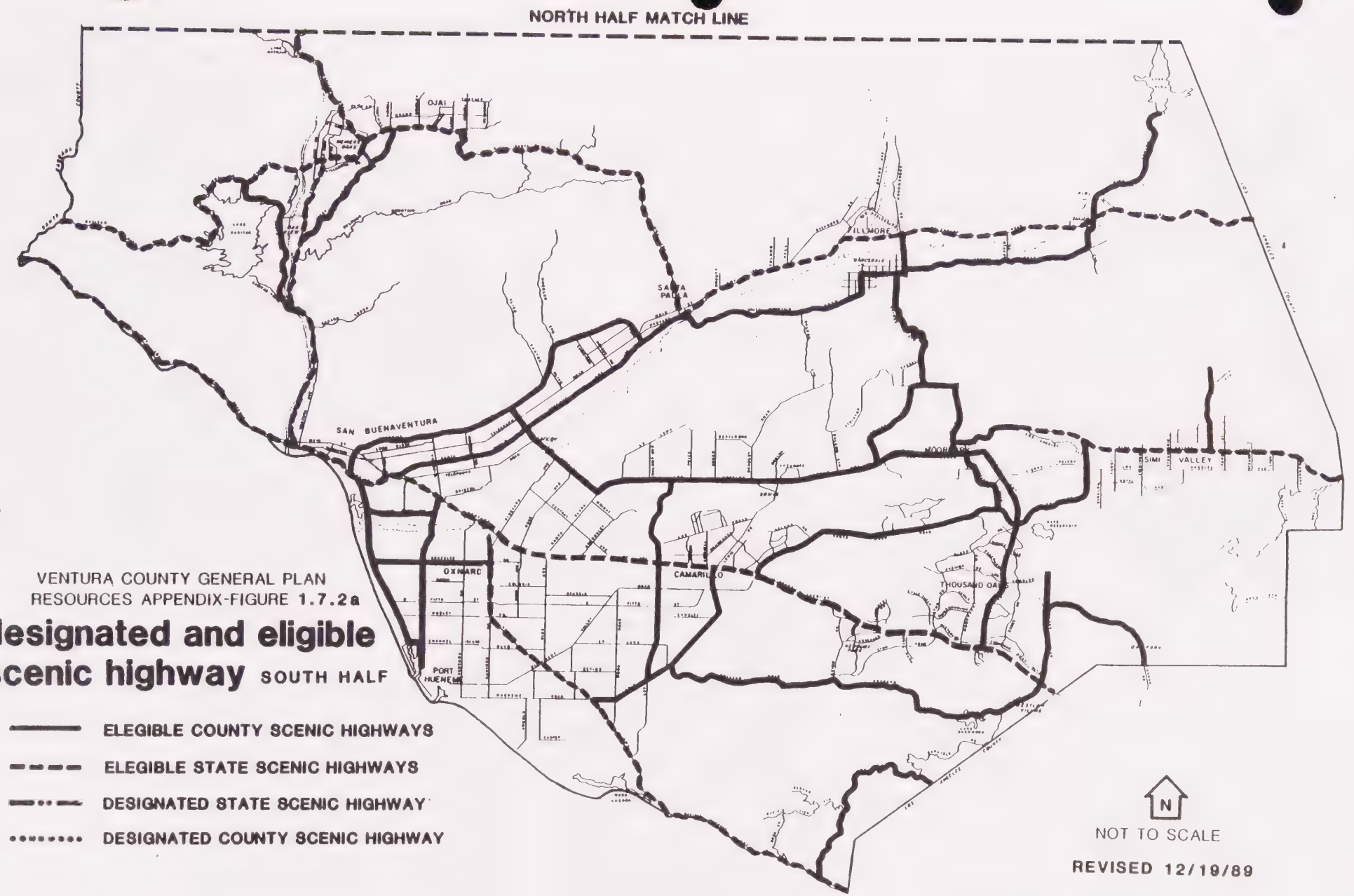
SCENIC RESOURCE AREA

CRITERIA MATRIX

Location	Accessibility by Road	Absence of Major Development	Recreational Use	Steep Slopes	Watershed Area	Dense Vegetation Cover	Stands of Trees	Abundance of Wildlife	Open Space Designation	Approximate Percentage of Land in National Forest or Other Government Jurisdiction
Lake Casitas	X	X	X	X	X	X	X	X	X	90%
Lake Eleanor (No longer within unincorporated territory)	X	X	X	X	X	X	X	X	X	100%
Matilija Lake	X	X	X	X	X	X	X	X	X	75%
McGrath Lake		X						X	x	95%
Lake Piru	X	X	X	X	X	X	X	X	X	80%
Lake Sherwood	X	X	X	X	X	X	X	X	X	-0-
Bard Lake		X								-0-

Source: Ventura County Planning Division

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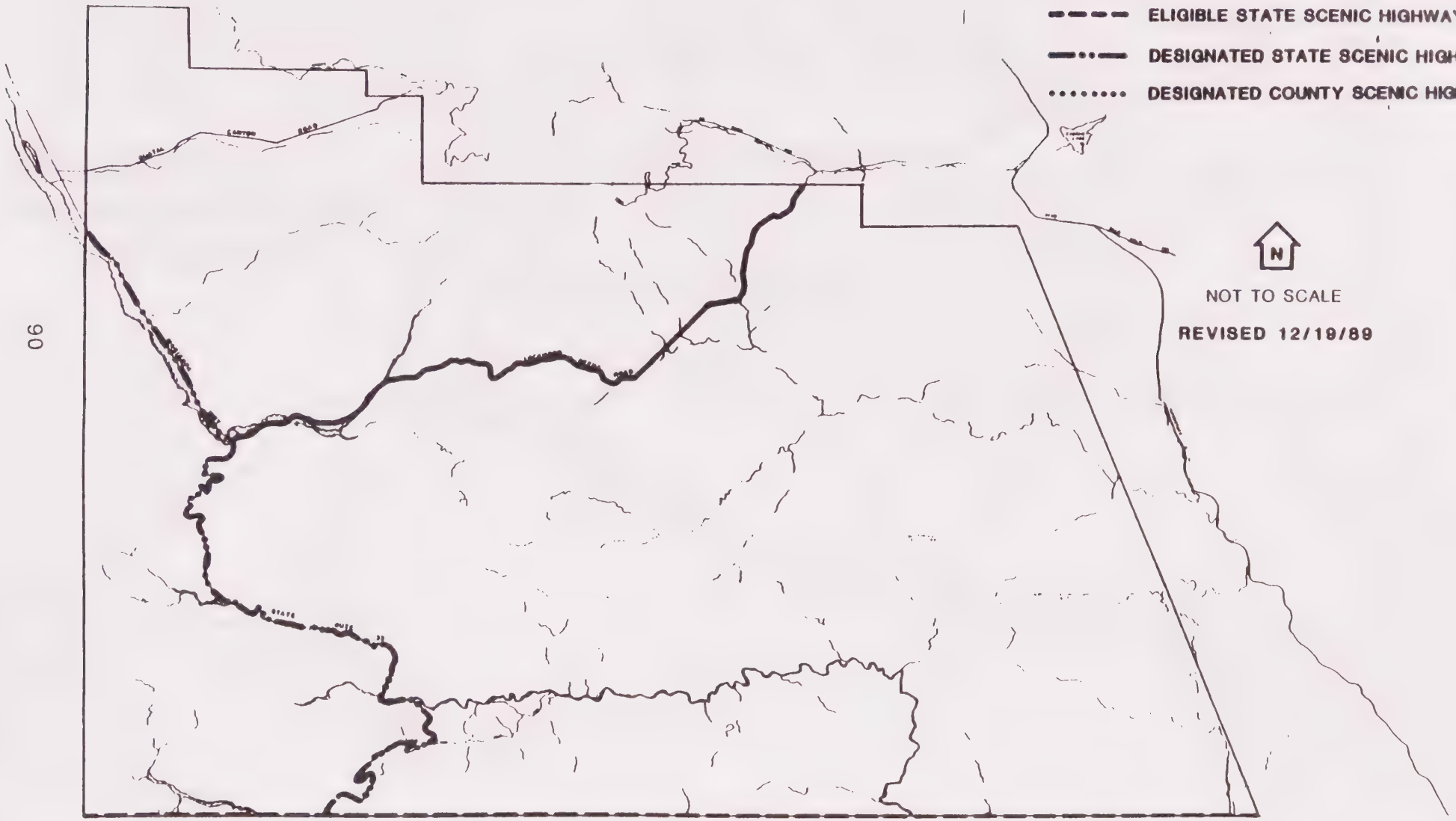
VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.7.2a

designated and eligible scenic highway SOUTH HALF

SOURCE: VENTURA PLANNING DIVISION - 1989

VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.7.2b

designated and eligible scenic highway NORTH HALF



SOURCE: VENTURA COUNTY PLANNING DIVISION – 1989

1.8 PALEONTOLOGICAL AND CULTURAL RESOURCES

Paleontological and **cultural resources** include a wide variety of elements which provide information and understanding of our biological, archaeological, historical and Native American heritage. In Ventura County, these resources include geological formations, sites, objects of material culture, buildings and structures, and districts of historical significance, all of which have left us a rich fossil record of millions of years of biological evolution, as well as a legacy of at least 8,000 years of human activity. These resources enable us to gain a greater appreciation for our own place in the continuum of history. And through a well-developed program of paleontological and cultural resource management, these resources can be preserved, managed, and studied for the benefit of future generations of Ventura County residents.

This Appendix examines the various resources in question, beginning with paleontological resources, some of which date back hundreds of millions of years. Next examined are cultural resources which include archaeological sites of great antiquity, historic sites and structures from as early as the initial Spanish occupation, and Native American Resources of our Chumash decendents.

These resources are defined and described in the body of the text below, and the relevant Federal, State, and local legislation which affects these issues is discussed briefly within each section. Finally, relevant issues and policy recommendations are offered which aim to strengthen and promote County policy towards these important and fragile resources.

1.8.1 PALEONTOLOGICAL RESOURCES

Paleontological resources refer to the fossilized remains of pre-historic plant and animal life. In Ventura County, paleontological remains include examples from throughout most of geological history, including the Paleozoic (600-225 million years ago), Mesozoic (225-70 million years ago) and Cenozoic (70 million years ago-present) eras. Careful scientific study of the fossilized life forms preserved in the sedimentary and metamorphic rocks of our region can result in identification of local paleoenvironmental conditions and biological evolutionary trends. In addition, certain fossil remains are only found in isolated outcrops in Ventura County and are therefore of unique scientific interest. At the other end of the spectrum, other fossil bearing formations are of economic value as well, including several shell mining operations in the County.

1.8.1.1 Geologic Setting

Ventura County falls into the western half of the Transverse Range, which is mainly composed of diverse sections of Tertiary (70-1 million years ago) sedimentary rocks, in places enormously thick, that were deposited in several large basins. These and associated volcanic rocks rest upon and against older sedimentary rocks, as well as still older crystalline rocks that in part correlate with those exposed in areas farther east in the San Bernardino mountains.

The area as a whole resembles the adjoining Coast Ranges (to the north) and Peninsular Ranges (in the Orange, San Diego and Baja California areas) in several respects, but is distinguished from them by prevailing east-west structural trends. Elongated, generally steep-sided folds, many of which have been ruptured along their axes or on one or both flanks by gently to steeply dipping faults, are characteristic of the basinal areas and those western ranges that consist mainly of sedimentary rocks, such as Ventura County's Pine Mountain. The other ranges are best regarded as great upthrown blocks. The great San Andreas-San Jacinto fault zone slices across the northeastern part of the County at an acute angle.

Several episodes of intense deformation, including a late Mesozoic mountain building episode and accompanying widespread volcanic intrusions, are recorded by the older rocks. The Cenozoic section contains unconformities, some of them extensive, that reflect a variety of

disturbances in both basin and source areas. The mid-Pleistocene (ca. 500,000 years ago) orogeny produced intense folding and uplift, and was responsible for development of the major elements of the present topography, including a number of impressive cliffs. Marine terraces of Pleistocene age are prominent features of the coastal landscape, and lie at elevations of as much as 1,200 feet above sea level. Some of them have been warped and broken by faults (Jahns, 1954: 17).

In terms of paleontological data recovery, the western part of the Transverse Range, of which Ventura County is a primary component, appears to be a particularly inviting area for further study. This is true because of the thick, well-exposed and carefully studied geological cross-sections in this region, well-documented due to the extensive oil exploration activities which have taken place here. Great interest is attached to the Ventura area Pliocene-Pleistocene units (10 million years ago-present) because of their thickness (about 18,000 feet) and because of the depth of deposition indicated by their fossils. Larger fossils are scarce except in obviously shallow-water intervals near the top of the sequence, but Foraminifera are abundant, particularly in the lower part.

1.8.1.2 Paleontological Resource Inventory

Paleontological resources in Ventura County include many widely dispersed outcrops of fossil bearing formations. It is anticipated that a complete inventory of known paleontological sites and formations will be performed, pending adequate funding and staff time.

1.8.1.3 Legislation

Although not specifically addressed in the National Environmental Protection Act (NEPA) or in the California Environmental Quality Act (CEQA), paleontological resources are protected as scarce non-renewable natural resources and are subject to the same environmental review process accorded other biological and cultural resources. The review process requires a responsibility to:

(1) inventory the subject resource; (2) assess its scientific and educational significance; (3) identify potential direct and indirect impacts; and (4) develop appropriate measures to avoid or otherwise mitigate adverse effects. In this light, it is the County's responsibility to assess environmental impacts and resource significance of any paleontological site affected by discretionary projects deemed non-exempt under the provisions of CEQA.

1.8.2 ARCHAEOLOGICAL RESOURCES

Archaeology may be generally defined as the study and reconstruction of prehistoric human societies. **Archaeological resources** refer to the material remains (artifacts, structures, refuse, etc.) produced purposely or accidentally by human beings. The scientific study of these remains can result in the identification of activities, types of adaptation to the environment, and changes in activities and organization that were experienced by groups of people in the past. Furthermore, these remains often have special significance to Native Americans, ethnic groups, special interest groups (i.e., avocational archaeologists) and the general public.

1.8.2.1 Prehistory in Ventura County

Despite over a century of rapid development, Ventura County retains a high degree of its historic and prehistoric heritage. Large portions of the mountainous North Half of the County are undeveloped and lie within the Los Padres National Forest Boundaries. In the more populous South Half of the County, extensive urbanization has affected a relatively small total land area. However, extensive agricultural practices have altered the landscape and made the reconstruction of our archaeological and historical heritage more difficult to assess.

The Ventura County region is part of a larger regional culture area which includes most of San Luis Obispo and Santa Barbara Counties as well. Within this larger regional area, King (1981) has proposed a culture history sequence which, in general outline, applies to Ventura County's prehistory. This sequence shall be adopted here.

- Early Period

  Southern California lays claim to several sites which claim great antiquity. Calico Hills, investigated by Leakey, et al. (1972) is claimed to be 200,000 years old or older. Sites on several of the Channel Islands have yielded ambiguous evidence of fire hearths between 40,000 and 30,000 years ago (Moratto, 1984: 54-59). Several other very early sites are claimed for San Diego, Orange, and Los Angeles Counties. However, none of these sites have yielded unequivocal evidence of late-Pleistocene human occupation of Southern California. In addition, no claims for great antiquity have as yet been made for sites in Ventura County.

  We have reliable evidence of Holocene (post-10,000 years ago) adaptions in our area, beginning approximately 8,000 years ago. These sites from the E_x Period have been located among the larger of the Channel Islands and involve often extensive remains of milling stones and manos, presumably used for seed grinding. It is inferred that these early residents were mobile hunter-gatherers who focused their subsistence strategies on locally available terrestrial and sea mammals, shellfish, and fish, although there is scant information available regarding their subsistence technology. The people of the E_x Period have also been known as the Oak Grove (Rogers, 1929), Archaic (Olson, 1930), or Millingstone People (Wallace, 1955).

  Similar lifeways persist throughout the next several thousand years, becoming better documented after 5,000 years ago. A relatively stable subsistence strategy developed in the Santa Barbara Channel area. Mortars and pestles came to replace the earlier millingstone technology, probably reflecting an increase in the utilization of acorns as a primary foodstuff. In addition, most of the likely maritime resources were now being utilized, as evidenced by the range of artifactual materials unearthed from sites of this period. Larger populations, greater regional integration and evidence of regional economic exchange are also inferred for the Early Period (E_x: 8000-3500 years ago; E_y: 3500-2500 years ago; E_z: 2500-1200 years ago).

- Middle Period

  Definite differences between coastal and inland adaptations begin to emerge in the Middle Period between 1200 B.C. and 1100 A.D. In the coastal areas, fishing technology improved and it is likely that seagoing craft were already in use. Burial evidence indicates increasing wealth and social stratification. In this period, and as early as 2500 B.C., the inland areas of the region were being peopled (Horne, 1981). These areas present a quite different range of subsistence opportunities which reflect much greater scarcity of resources and, therefore, much smaller and more mobile populations. In contrast to the resource base of the Coastal Chumash, the inland peoples focused on terrestrial resources, such as deer hunting and acorn and sage seed gathering, as well as seasonal salmon runs, which were particularly plentiful on the Ventura River. Stable trade between coastal and inland Chumash is inferred from excavation data in the Santa Monica Mountains area, although greater environmental and archaeological information is required before models of such interaction can be developed. The Middle Period is marked by the following temporal divisions: M_1 (1200-500 B.C.); M_2 (500 B.C.- 300 A.D.); M_3 (300-800 A.D.); and M_4/M_5 (800-1100 A.D.).

o Late Period

The Late Period, after 1100 A.D., may definitely be called the Chumash Era, although it is likely that Chumash ancestors have inhabited the region from quite early on. In material culture, the Chumash developed highly evolved basketry, stone work (steatite, for example), shell beads for exchange, and seagoing craft (tomol). It has been said that the Chumash attained a higher degree of social complexity than most other non-agricultural peoples in North America. Certainly, upon the arrival of the Spanish explorers, the Chumash of Ventura County were a highly evolved, numerous and prosperous people. The Late Period is most likely a continuation and elaboration of the technological and social structures already in place in the Chumash area. It is also likely that communication and trade with non-Chumash peoples accelerated during this period. Bead manufacture became more sophisticated, with emphasis on Olivella callus beads and various cylinder beads. Boat manufacture most likely increased in production, with specialization at certain villages apparent from the ethnohistoric record. In particular, Ventura and further north, Carpinteria ("carpenter's shop" in Spanish) were recognized by the Spanish as boat production centers. The Late Period is marked by the following temporal divisions: L_1 (1200-1500 A.D.); L_2 (1500-1782 A.D.); and L_3 (Historic Chumash).

1.8.2.2 Archaeological Resource Inventory

The accompanying Figure 1.8.1 portrays generalized archaeological site sensitivity areas based on known or suspected prehistoric use areas (Public Works Agency, 1973). Due to the fragile nature of these resources, known or suspected archaeological site locations are not indicated on the map(s). Such information is considered confidential and may be consulted on a need-to-know basis by qualified researchers. The UCLA Archaeological Survey maintains complete archaeological site report and locational data for Ventura County and may also be consulted by qualified persons.

1.8.2.3 Legislation

Federal, State and local governments have developed laws and regulations designed to protect cultural resources under their jurisdiction or that may be affected by the actions they undertake. The activities and procedures of lead agencies in this regard involve the responsibility to: (1) inventory cultural resources within their jurisdictions and/or area(s) of undertaking, (2) assess the scientific and ethnic/social significance of identified resources, (3) identify potential direct and indirect impacts of an undertaking on these resources, and (4) develop appropriate measures to avoid or otherwise mitigate adverse effects.

o Federal Cultural Resource Legislation

Federal legislation is important not only because it sets national policy, but because it establishes an historic preservation system which extends to the State and local levels. The significance of cultural resources and their eligibility for the National Register of Historic Places is assessed by uniform criteria and procedures regardless of the jurisdiction in which they are found. Federal legislation is also important because it establishes policy for Federal agencies by which the County may be enjoined on local projects falling within the jurisdiction of these agencies (for example, the Calleguas Creek project - CA-VEN-110).

The Antiquities Act of 1906 was the first piece of historic preservation legislation. It expressed concern over the destruction of important archaeological and historic properties by nonprofessionals, and it established a system of permits for the conduct of archaeological studies on federal lands. Penalties were specified for noncompliance. Some antiquities permits issued under

this law are still in effect, though new permits are now being issued under the Archaeological Resources Protection Act of 1979 and its implementing regulations.

A great deal of archaeological survey and excavation was conducted during the 1930's under the public works programs designed to pull the United States out of the Great Depression. Much of this work involved excavations at sites that were to be flooded by reservoirs. After World War II, dam construction proceeded all across the country and numerous archaeological excavations were conducted in conjunction with this construction. This led to the passage of the Reservoir Salvage Act in 1960, which authorized expenditure of federal funds on archaeological salvage at Federally funded reservoir projects. In 1974, the Archaeological and Historical Preservation Act amended the Reservoir Salvage Act. This act deals with the preservation of data, not the preservation of historic properties as physical entities. It authorizes expenditure of up to 1 percent of the construction cost of a Federal action for the purpose of data recovery.

The National Environmental Policy Act

This law established the requirement that any major Federal actions significantly affecting the quality of the human environment be preceded by a detailed analysis and report on those effects. Such a report is called an environmental impact statement (EIS). NEPA states explicitly that it is a national policy to "preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice." NEPA is important as a precursor to State environmental legislation (CEQA), and also comes into play when County federal jurisdictions overlap.

The Archaeological Resources Protection Act (ARPA)

The intent of the Archaeological Resources Protection Act of 1979 is to ensure preservation and protection of archaeological resources on public and Indian lands. ARPA places primary emphasis upon a Federal permitting process in order to control the disturbance and investigation of archaeological sites on these lands. In addition, ARPA's protective provisions are enforced by civil penalties for violation of the Act.

ARPA mandates consultation procedures prior to initiation of archaeological research on Indian lands or involving Indian archaeological resources. Section 4(c) requires Indian tribes be notified of possible harm to, or destruction of, sites having religious or cultural significance to that group. The Federal land manager must notify affected tribes before issuing the permit for archaeological work. Section (g)(2) specifies that permits to excavate or remove archaeological resources from Indian lands require consent of the Indian or Indian tribe owning or having jurisdiction over such lands. The permit, it is also stipulated, shall include such terms and conditions as may be requested by the affected Native Americans. In regard to the custody of archaeological resources, ARPA stipulates that any exchange or ultimate disposition of archaeological resources excavated or removed from Indian lands shall be subject to the consent of the Indian or Indian tribes which owns or has jursidiction over such lands.

o State Legislation

Protections for cultural resources extend from the federal to State level via the historic preservation system. Continuity between these levels is also found in environmental legislation, such as the California Environmental Quality Act (CEQA) and California Coastal Act (CCA), which essentially extends the policies and intent of NEPA to local regions and communities. State law (California State

Executive Order B-64-80) directs agencies to inventory cultural resources under their jurisdiction. Information on these properties, as well as site data gathered for local projects subject to CEQA, are forwarded to the nearest cultural resource data Clearinghouse (the Ventura County Clearinghouse is located at UCLA). There they are recorded, mapped, and assigned an alphanumeric designation appropriate to the County Inventory. These data, along with supporting documentation and other written reports, are made available to official review agencies and/or qualified professionals for the purpose conducting initial studies and other environmental determinations.

California Environmental Quality Act

All undertakings initiated by County agencies and defined as "projects" under the California Environmental Quality Act (CEQA) are required by law to consider potential impacts on archaeological, historical, and Native American resources. CEQA directs agencies and persons subject to its provisions to identify and mitigate the environmental effects of an undertaking on all cultural properties which may be regarded as significant in California history. CEQA provides protections for both material and nonmaterial resources and, like NEPA, recognizes the importance of the cultural context of these resources.

Appendix G of the CEQA Guidelines, for example, states that a project will have a significant effect if it will adversely impact "a property of historic or cultural significance to a community or ethnic or social group..." (Section j), or if it will "Conflict with established... religious uses of the area" (Section w). Appendix K of the CEQA Guidelines specifically addresses impact assessments and mitigation measures for cultural resources.

California Coastal Act

The California Coastal Act (CCA) also recognizes archaeological and historic resources as key environmental issues, and requires the development of mitigation measures in coordination with the California Office of Historic Preservation (SHPO).

1.8.3 HISTORICAL RESOURCES

Historical resources refer to the material and non-material expressions of human adaptations which characterized the post-contact or historic period. These resources include historic event or activity sites, historic archaeological sites, standing architecture and other significant properties, documents and other sources of historical information, objects of material culture; and secondarily, the more intangible cultural qualities, such as folklore, social organization, and value systems, which are associated with these properties.

The material and non-material aspects of culture are so closely interwoven that evaluation of historic properties and other material items, especially those currently in use, is incomplete without understanding the values and meaning attached to the material item and the importance of the item or property to the maintenance of a particular aspect of that culture. Because history studies must necessarily address both historic properties currently in use and abandoned historic sites, it is important to differentiate between resources that are part of living cultural systems and those that are not. Both kinds of historic resources can be considered significant for their inherent historic values. However, in the former case, assessment of the significance of these properties must also consider the values placed on them by the community or cultural group and the importance of the property or material item in the maintenance of an aspect of that culture.

The body of cultural resource laws, regulations, and compliance precedures that has evolved over much of this century is generally referred to as the historic preservation system. Historic preservation programs encompass the full range of archaeological, historical and Native American resources, with an emphasis on material remains, or what are sometimes referred to generically as historic properties. The meaning of the word "historic" in this context, then, closely approximates "antiquities," and is not a literal equivalent to "historical" (i.e., relating exclusively to the period commencing with Euroamerican contact).

1.8.3.1 Historical Resource Description

By 1846, most of the arable land in Ventura County had been parceled out into nineteen large ranchos, ranging in size from Rancho Simi (113,000 acres) to the Tico lot in San Buenaventura (29 acres) (Triem, 1985:34). These ranchos involved a hacienda system of economic organization relying for the most part on native labor bound in debt peonage. The primary product of the ranchos was cattle and, to a lesser extent, sheep. Between 1848 and 1856, during the Gold Rush in the Sierra Foothills, the cattle market peaked and generated considerable wealth for many of the Spanish and Mexican rancho families in Ventura County. Thereafter, the ranchos slowly declined with the arrival of Anglo settlers and traders who brought with them a more developed system of resource exploitation. This, combined with the difficulties in providing legal title to the land grants with the advent of the Land Act of 1851, served to weaken Hispanic control over the local economy. By the 1870's, a majority of the rancho lands were in the hands of Anglos who transformed the face of Ventura County. The cattle industry declined and was quite rapidly replaced by agriculture and an increasing interest in oil exploration and production.

Until 1873, Ventura County was attached to Santa Barbara County, but the difficulties of traveling to Santa Barbara and the natural geographic cohesiveness of the Ventura County region was recognized early on. With oil, agriculture and shipping taking the lead, the 1870's gave rise to much of the structure which characterizes the County to this day. Many of the communities were founded during the 1870's, including Santa Paula (which was the second largest town after San Buenaventura by 1879), and Port Hueneme. Thomas Bard, the County's only United States Senator, laid out the port in 1869 and had grand plans for a western rail hub. His wharf, completed in 1871, instead became a focus of harvest time agricultural shipments to the East. (Oxnard did not get its start until 1889 with the completion of the Oxnard Brother's sugar beet factory, and was incorporated in 1903.) The 1870's also saw Nordhoff laid out, later changed back to its original name of Ojai. The railroads, which arrived in 1886, spurred the growth of the Santa Clara River towns of Fillmore, Bardsdale and Piru, and helped increase County population from 5,073 in 1880 to 10,071 in 1890. Santa Paula also prospered from the railroad. The oil industry grew quickly in the 1880's, especially in and around the Ojai and Sespe fields, which continue in production today. Other important industries established prior to the turn of the century were citrus ranching, especially navel oranges, and tourism, centered on Ojai and Santa Paula's natural hot spring resorts.

A second tier of towns was laid out with the completion of a faster San Francisco - Los Angeles rail link through Santa Susana Pass in 1901. Camarillo, Moorpark and Santa Susana (later, Simi Valley) all were founded and grew up around the Southern Pacific depots of the railroad line. Newbury Park and the Conejo Valley had a somewhat different origin, having developed as dry farming and cattle ranching areas serviced by an overland stage coach line.

In 1916, the Ventura oil field in the Ventura Avenue area, was discovered. This created a development boom in Ventura and to a lesser extent, in the Santa Paula and Fillmore areas which also increased their oil production. The decade of the 1920's saw increased building activity and the development of the California bungalow as a distinct architectural style as large areas were built up for oil field worker housing. The disaster

of the stock market crash of 1929 was preceded by another disaster in Ventura County which has yet to be rivaled. On March 12, 1928, the Saint Francis Dam in San Francisquito Canyon near Castaic, gave way, killing 400 people and destroying more than 1,200 homes and 7,900 acres of farmland in the Santa Clara River Valley (Triem, 1985: 127-128).

The Depression of the 1930's, although difficult for Ventura County farmers and businesses, has left the County with a wealth of architectural monuments. Particularly, through the many New Deal relief programs instituted after 1933, a good deal of the County's infrastructure in the form of roads, post offices, fire stations, schools and public art works was created. In addition, an influx of immigrants from the hard hit central and southern United States put down roots in Ventura County during this period. And beginning in 1940 with the completion of the U.S. Navy's deep-water port facilities in Port Hueneme, the military and, to a lesser extent, the fishing industry, became important elements in the rich economic mix of Ventura County's South Half.

1.8.3.2 Inventory of Historical Landmarks

The following inventory of historical landmarks and points of interest (Figure 1.8.2) reflects the diversity of sites, buildings and natural features which have been recognized by the Cultural Heritage Board for their outstanding historical character. Included are Chumash archaeological sites, Spanish and Mexican adobes, Victorian era mansions, banks, trees and innumerable other points of interest. The Cultural Heritage Board is continuing to add to this list as nominations for landmark status are received, researched and reviewed.

1.8.3.3 Legislation

The development of a system of historic preservation laws and regulations spans the last 75 years. Over the past 20 years especially, these statutes have been developed into a well-defined set of procedures for the protection of significant historic properties.

- Federal Preservation Legislation

  The Historic Sites Act of 1935 declared that it is national policy to "preserve for public use historic sites, buildings, and objects of national significance." The National Historic Preservation Act of 1966 has provided a broader base for the implementation of this preservation goal. This Act, which created the National Register of Historic Places and the Advisory Council on Historic Preservation, is supported by two implemental statutes. The first, Executive Order 11593, requires in Section 2(a) that federal agencies "locate, inventory, and nominate properties under their jurisdiction or control to the National Register." The second, 36 CFR 800, Protection of Historic and Cultural Properties, establishes procedures to be followed in the environmental impact analysis process under the authority of the Advisory Council. Section 106 of this act requires that federal agencies consult with the Advisory Council prior to engaging in any undertaking that would affect a property on or eligible for the National Register.

- State Historic Preservation System

  While there is some variability nationally, all states provide for the equivalent of an Office of Historic Preservation under the direction of a State Historic Preservation Officer (SHPO). The California SHPO (with offices in the State Department of Parks and Recreation) and various State Clearinghouse data repositories serve as a conduit for the inventory and assessment of cultural resources within the State that are eligible or potentially eligible for the National Register. The SHPO may also comment on environmental documents, and take the lead in the development of regional preservation programs and compliance guidelines.

- Cultural Heritage Board

On the local level, the Ventura County Cultural Heritage Board researches and records County history and makes historical landmark designations. The Board was created in 1966 by the County Board of Supervisors and is composed of appointed members from the five supervisorial districts and two members at large. The General Services Agency provides staff support and facilities for the Board which meets monthly. Upon recommendation of the Cultural Heritage Board, the Board of Supervisors makes declarations of landmark status. Landmark status is granted to cultural resources, structures, natural features, and sites or areas of historic merit. The Board operates under the provisions of County Ordinance Nos. 2026, 2737, and 3568. The primary preservation tool at the disposal of the Cultural Heritage Board resides in a requirement that any site designated as an official County Landmark may not be altered or demolished without review by the Cultural Heritage Board. If an owner's application for a Certificate of Appropriateness is disapproved, the property owner is prohibited from taking action for 180 days from the date of the disapproval.

The Cultural Heritage Board assesses landmarks and makes landmark declarations when any of the following "Criteria for Landmark Status" is met:

1. Character, interest or value, regardless of age, is significant to the heritage of the community.
2. A significant historical event occurred at the site.
3. It is reminiscent of an early state of development.
4. It is identified with a person who significantly contributed to the culture or development of the County, State or the Nation.
5. It exemplifies a particular architectural style or way of life.
6. It is the design or work of a person whose efforts have significantly influenced the heritage of the County.
7. It demonstrates outstanding architectural design, detail, materials, or craftsmanship.
8. Its preservation is essential to the integrity of another landmark.
9. Its location or physical characteristics represent an established visual feature of a neighborhood.
10. It has potential of yielding significant information of archaeological interest.
11. It is a natural environment that strongly contributes to the well-being of the community.

1.8.4 NATIVE AMERICAN RESOURCES

While unique cultural value may be attached to historic properties by several ethnic groups, the vested interests and rights of Native Americans receive special attention in the law. This special status derives from two factors. First, the vast majority of archaeoloical resources consists of the material remains of populations which are directly ancestral to contemporary Indian groups. In the case of Ventura County, for example, the genealogical links of local Chumash individuals and families may, in many cases, be traced through the Mission records to specific villages and locations. The treatment of regional archaeoloical and historic sites which contain the cultural and/or human remains of ancestral populations,

therefore, is an issue of deep religious concern and high emotional content. Second, the law provides special protections because Native American culture is a living tradition. That is, contemporary Chumash Indians share a distinct worldview and lifeway which has persisted through time to the present day. Resources important to Native Americans are those material and nonmaterial elements which affect the spiritual well-being of living peoples and which ensure the perpetuation of cultural traditions from present to future generations.

Native American cultural resources may be conceived of as having three primary components: (1) material cultural resources, or cultural properties, (2) nonmaterial cultural resources, and (3) cultural character. Cultural properties refer to tangible aspects of Native American cultures, that is, to regions, areas, features, sites, biota or other land-based resources which are of cultural value to contemporary peoples. These may include such diverse features as former settlements, aboriginal mineral quarries, oak groves, or traditional basketry plants. Nonmaterial cultural resources refer to intangible, spiritual qualities, essences, or beings which may be associated with features of the natural environment, as defined by traditional cosmologies. Such resources may include the sources of power attached to mountain peaks, ritual or ceremonial sites, burial grounds, rock art sites, sacred biota, springs, and ritual objects, where the significance and activity of the resource transcends its material manifestation or dwelling place. Finally, cultural character refers to those qualities of Native American communities which both define them as distinct from non-Indian population segments, and contribute to their persistence. Cultural character includes aspects such as social organization, meaning and cognitive systems, norms, customary behavior patterns, and religion and worldview.

1.8.4.1 Resources

The Ventureno Chumash, linguistically distinct from their neighbors, occupied most of Ventura County when first encountered by the Spanish. Cabrillo in 1542 and Vizcaino in 1602 made the initial contacts and may have had some early epidemiological impacts on the Chumash. However, not until the 1770's and 1780's did Spanish colonization and evangelization efforts begin to impact the established Chumash villages. These villages were sedentary affairs of several hundred persons, known to the Spanish as rancherias. They consisted of hemispherical houses, sweathouses, storehouses, a gaming area, a ceremonial enclosure, and at some remove, a cemetery.

The Chumash were patrilineal and had definite social distinctions based on wealth. Village political power was vested in inherited positions and in the 'antap cult leaders, whose ceremonial powers included typical shamanic elements. The Chumash of Ventura County were also great artisans, and their rock art in the interior region is considered outstanding.

When the Spanish arrived in 1782, an estimated 2,500 to 4,200 Ventureno Chumash lived in the County area. These estimates may be low, given the possibilities of prior population collapse from earlier European contacts. The Spanish intended to place their third Mission midway between Monterey and San Diego in what would become San Buenaventura. This changed; San Buenaventura became the Ninth Mission and lost its potential for Presidio status to Santa Barbara.

Following establishment of the San Buenaventura Mission in 1782, The Spanish Mission system functioned to replace the Chumash economic and social system with an agricultural and craft economy which, at its peak in the second decade of the 19th century, had already established the Ventura County region as a prime agricultural producer of such commodities as peas, apples, plums, figs, pomegranates and apricots. The Chumash retained small river bottom plots of corn, pumpkins and watermelons. This abundance was cut short by devastating epidemics in 1823-24 and 1827 and by the secularization of the Mission System in 1834. Twelve years after

Mexico gained control of Alta California from the Spanish in 1846, the Mission was sold and became a part of the Arnaz Ranch, or Rancho Ex-Mission. In 1862, under American sovereignty, the Mission was repatriated to the Catholic Church.

1.8.4.2 Legislation

The legal basis for protection of Native American cultural resources and related concerns derives from varied and distinct legislation. Some of this legislation dates back to early treaties with individual Indian Nations while other legislation is as recent as the American Indian Religious Freedom Act of 1978. Unlike the historic preservation system, the Native American legislation has not yet been drawn together or systematically integrated.

o Federal Legislation

Several types of federal mandates are relevant to the participation of contemporary Native American communities in cultural resource preservation programs. These include references in historic preservation and environmental laws, legislation specifically addressing religious freedom, in the special trust relationship existing between the Government and federally-recognized Indian tribes, and in any number of historic treaties. These will be discussed briefly.

In 36 CFR 800(a)1, consultation with Native Americans in the cultural resource inventory process is suggested. This section states, in part, that the agency shall consult:

> . . . individuals or organizations with historical and cultural expertise, as appropriate, to determine what historic and cultural properties are known to be within the area of the undertaking's potential environmental impact.

The direct participation of Native Americans in the inventory, impact assessment, and mitigation process is specifically noted in 36 CFR 800.1:

> Federal agencies and State Historic Preservation Officers should seek assistance from the public, including other Federal agencies, units of local and State government, public and private organizations, individuals and Federally recognized Indian tribes in evaluating National Register and eligible properties, determining effect and developing alternatives to avoid or mitigate an adverse effect. The public has considerable information available that could assist federal agencies and the State Historic Preservation Officer in meeting their responsibilities under these regulations.

National Environmental Policy Act (NEPA): Direct Native American involvement in the NEPA process is cited in two Sections of the CEQA regulations. Section 1506.6 requires Agencies to "involve the public in preparing and implementing their NEPA procedures," and, in cases where environmental effects (as defined above) are of local concern, to give notice to the public. This includes "Notice To Indian Tribes When Effects May Occur On Reservations" [Section 1506.6(3)(ii)]. In addition, Section 1501.7(a)(1) requires that Native Americans be involved in the scoping process. The lead agency is instructed under this regulation to:

> Invite the participation of affected Federal, State, and local agencies, any affected Indian tribe, the proponent of the action, and other interested persons...

American Indian Religious Freedom Act: The American Indian Religious Freedom Act of 1978 declared it the policy of the United States "...

to protect and preserve for American Indians their inherent right of freedom to believe, express and exercise the traditional religions of the American Indians, Eskimo, Aleut and Native Hawaiians. . ." The Resolution specifies the rights of access to sites, use and possession of sacred objects, and to the freedom to worship through ceremonial and traditional rites. The Act, then, protects a wide range of sites, materials and cultural activities.

The American Indian Religious Freedom Act (P.L. 95-341) concerns cultural resources as material objects in that it protects access to sacred sites and enables the use and possession of materials deemed sacred by tradition. However, this law also concerns cultural activities, such as the performance of traditional ceremonies and rituals which are essential to the preservation of Native American religious institutions and lifeways. The Religious Freedom Act thus makes a significant departure from historic preservation law in that it includes practices that contribute to cultural persistence.

Agencies are now required by law to ensure that their actions do not restrict or otherwise infringe upon the customs, ceremonies and traditions of Native American religions. As directed by the President, federal agencies were given one year to examine their policies and procedures, working with Native traditional and tribal leaders to assure that the interference and insensitivity of the past will not be repeated in future practice. To this end, a federal agency Task Force was established, and their final report submitted to Congress August, 1979 (American Indian Religious Freedom Act Report, P.L. 95-341, Federal Agencies Task Force, Department of Interior).

Treaties: Treaties have had relevance in environmental impact assessments in two primary ways: (1) they define aboriginal tribal territories in whole or in part, and hence the contemporary "spheres of influence" of Indian groups over ancestral resources, and (2) they sometimes provide the basis for litigation over the alleged "illegal taking" of land, and renewed Indian ownership claims. Such land claims are often accompanied by expressed concern for the sanctity of the aboriginal territory as a holy land.

In Ventura County, as in other areas of Sourthern California, the U.S. Government was a relative latecomer in terms of non-Indian settlement. Under the 1848 Treaty of Guadalupe Hidalgo with Mexico, the United States agreed to recognize and protect Indian title land and associated water rights. This obligation was effectively negated by the Act of March 3, 1851, which returned to the public domain all lands for which title claims failed to be presented to the Commissioners within two years. Section 16 of the Act directed the Commissioners to determine the tenure of land held by Indians and to forward this information to the Secretary of Interior, but this report was allegedly never prepared. On March 3, 1853, the title lands and associated water rights of the local Indians were extinguished without compensation and returned to the public domain. Land title claims were settled in Indians of California v. United States, Docket 31, et al., 8 Ind. Cl. Comm. 1 (1959), 13 Ind. Cl. Comm. 369 (1964).

- California Legislation

Two separate pieces of legislation have been passed in California which recognize traditional Native Amercian cosmologies as part of an ongoing cultural tradition, and provide protection for places, resources, and ritual activities considered sacred by contemporary Indians.

Native American Historical, Cultural, and Sacred Sites: In 1976, Section 5097.9 of the Public Resources Code took what was at the time a bold step in prohibiting interference with the free expression of

Native American religions by any public agency or contracted private party on public land, and by similarly prohibiting the disturbance of any Native American cemetery or sacred site by such parties on public land. Significantly, this State law preceded the Federal American Indian Religious Freedom Act by some two years. This same legislation also established the Native American Heritage Commission, a body composed of nine members (five of which must be traditional elders or spiritual leaders nominated by California Indian tribes) and an Executive Secretary, appointed by the Governor. The Commission, which remains in active status, is charged with a variety of powers and duties relating primarily to the inventory, treatment, and preservation of Native American burial sites and other sacred areas, and to religious freedom issues arising out of access to religious and spiritual areas and resources. The code directs State and local agencies to cooperate with the Commission, and empowers the Commission to conduct investigations of proposed actions by public agencies.

California State Senate Bill 297: Passed in 1982, this bill provides protection for American Indian burials and associated items, and empowers the Native American Heritage Commission to catalogue existing burials and to resolve disputes relating to the treatment and disposition of Indian burials and grave goods. Importantly, SB 297 has been incorporated into the CEQA Appendix K guidelines for assessing cultural resource impacts.

1.8.5 CONCLUSIONS

A variety of approaches may be utilized by Ventura County in efforts to preserve and protect our paleontological and cultural resources. These approaches include fundamental resource management tools: inventory, assessment and mitigation. As with any fragile resource, the more we are aware of its nature, the better prepared we are to deal in an effective and enlightened way with it. The following findings and recommendations present possibilities for a comprehensive resource management approach to these issues.

1.8.5.1 Paleontological Resources

Paleontological resources could be protected and preserved in much the same manner as any scarce, non-renewable natural resource. Ventura County is fortunate in that the County contains numerous and unique fossilized life forms spanning most of geologic history in which life has been present. Because of this, the County should take stock of this resource base and act to protect it within the reasonable guidelines pertaining to all such resources. To this end, the Resource Management Agency could:

- Inventory and map all fossil bearing formations, outcrops, and sites with the assistance of qualified professionals in the paleontological and historic geology fields;

- Assess the significance of paleontological sites and determine direct and indirect impacts resulting from discretionary development requests; and

- Develop mitigation measures to minimize or eliminate negative impacts upon these resources, as determined by professionals in this field.

In addition, the Resource Management Agency has developed a roster of qualified paleontological consultants. When utilized, these consultants are charged with determining impact significance with respect to CEQA Guidelines for non-renewable natural resources, and help determine appropriate mitigation measures with respect to protection, preservation or utilization of subject paleontological resources.

1.8.5.2 Cultural Resources

With regard to **cultural resources** (archaeological, historical and Native American issues), an important area of concern involves the prehistoric and historic data base in the form of sites, components, and artifacts, which are both perishable over time and, to some extent, destroyed during the course of excavation or restoration. For example, in the restoration of an historical property, such as the Faulkner House near Santa Paula, our knowledge of the original interior colors would be destroyed if inadequate analysis was performed prior to repainting. In this light, therefore, it is important that every effort be made to recover data as completely as possible. The preservation and protection of these resources for their scientific, educational and cultural values is important for this reason. This requires that an adequate data base be acquired and maintained by Ventura County and that existing cultural resources be monitored on a continuous basis. The County Planning Division has responsibility with regard to developing standard methodologies and assessment procedures for prehistoric cultural resources, historic archaeology, Native American concerns, and historic preservation sites and issues. Similarly, the data base and monitoring responsibilities for archaeological, Native American and historic resources is maintained by the Planning Division. In all cases, where discretionary development is proposed, the Planning Division retains review functions with regard to all cultural resource entities.

There is a need for cooperation among the County, the cities, special districts and other appropriate agencies and organizations, and with private land owners, in acknowledging and preserving cultural resources. To this end, over and above the various requirements of the California Environmental Quality Act, there needs to be assessment of the functions of the various entities involved and, to some extent, a centralized informational clearinghouse function established at the County level. In addition, a more active cooperative role could be assumed at the County level between the three "Chumash" counties of Santa Barbara, San Luis Obispo and Ventura, since the research problems and archaeological data base are similar. Currently, the University of California, Los Angeles (UCLA), acts as Clearinghouse for archaeological data for Ventura County, while the University of California, Santa Barbara assumes the Clearinghouse role for the other two "Chumash" counties. This confusion in data repository institutions needs correction with the recommendation that Clearinghouse functions be either: 1) transferred to the University of California, Santa Barbara facility; or 2) transferred, when appropriate, to the University Center at Ventura. The latter option is not feasible until both a permanent campus is selected and built and a qualified Anthropology-Archaeology department is staffed. In the interim, a working relationship with UCLA is desirable and should focus on sharing of data and, where appropriate, literature reviews and record searches through UCLA Archaeological Survey staff. In addition, Ventura County Historical Museum staff and Ventura County Archaeological Society members should be consulted regarding potential site impacts when evaluating discretionary development requests.

CEQA requires site impact avoidance, project redesign, or adequate mitigation for unavoidable impacts with regard to any discretionary development. In addition, mitigation follows guidelines established by the State Office of Historic Preservation (SHPO) and the Native American Heritage Commission. Although these issues are fairly self-evident, in the case of Native American resources, we need to turn to the Native American Heritage Commission for guidelines, which read in part:

> All public agencies and government authorities initiating or approving a project or undertaking are legally obligated..... to coordinate compliance with federal and state environmental law and policy (regarding) the identificaiton and protection of those places and values which have special heritage, religious, or social significance to contemporary California Native Americans.

This advisory document specifies what categories of cultural resources with heritage significance to Native Americans should be considered in the

planning process. These include: (1) burial places and cemeteries, (2) heritage sites which are identifiable as archaeological deposits, (3) places of spiritual or social importance, such as prayer sites, ceremonial sites and shrines, areas important in legend or folklore, or areas attributed with special power or sacredness, and (4) native plants and animals used in traditional hunting, gathering, or curing practices.

This legislation also requires the County Coroner to notify the Commission of the discovery of Indian skeletal remains, and further, makes it illegal for private individuals to possess Native American remains or burial goods removed after January 1, 1984.

The issue of destruction or vandalism of archaeological or cultural sites requires that the County strictly limit public access to site records and prohibit publication of site locational data. However, Section 1364-4 of the Ventura County Ordinance Code requires that archaeological site inventories be made available to the public. This requirement precludes the development of a Countywide archaeological inventory, since such data must remain necessarily confidential to avoid destruction by looting. This inconsistency between General Plan policy and Ordinance requirements should be addressed by amending the Ordinance Code to require strict confidentiality of archaeological site locational data. With this alteration of Ordinance requirements, development of a Countywide archaeological inventory and data base may proceed.

In addition, the Planning Division needs to identify any properties likely to be protected by historic preservation legislation during the project review process. Such sites should be evaluated for potential architectural or historical significance and forwarded to the Ventura County Cultural Heritage Board for evaluation and possible nomination to the National Register of Historic Places. National Register nominations also cover prehistoric sites and locations of sufficient significance. Currently, National Register nominations are coordinated by the individual consultants working on particular projects. This system requires that Planning Division staff have sufficient awareness of cultural resource issues to require that nomination papers for all eligible archaeological and historic sites associated with a particular discretionary development be submitted. Project conditions should require the nomination process be carried out whenever warranted with costs borne by the project applicant.

Finally, with respect to all historic preservation issues, the Historic Preservation Element Guidelines (Governor's Office of Planning and Research, September 1976) suggest that in the area of Land Use, the County should:

"1. Recognize landmarks and historic districts, existing and potential, as a special category of land use and should establish, as policy, rezoning historic property to be consistent with use or appropriate potential use;

2. Call for zoning incentives, when downzoning is impossible, to encourage developments that incorporate historic properties into projects or adapt them to new use without damaging the integrity of those properties;

3. Initiate a program to mitigate the detrimental effects of incompatible land use surrounding cultural resources;

4. Encourage adaptive reuse of historic structures when change of use is the only alternative to destruction;

5. State, as policy, that public entities have an obligation to respect the cultural integrity of site, structures, or objects they maintain or occupy;"

In the area of transportation and public works projects the County could:

1. Call for study of proposed street improvements from freeway routing and street widenings to the replacement of street furniture or landscaping, to resolve potential damage or insensitivity to the site or context of cultural resources;

2. Establish as policy the retention of existing historic vegetation, mature street trees or public landscaping of cultural significance;

3. Take steps to avoid introducing excessive traffic into historic area and to correct situations where this is already the case;

4. Develop enhancement techniques to be applied in historic areas with weak streetscape support.

With regard to housing policy, the County could:

1. Reaffirm that historic preservation is a catalyst for neighborhood improvement and community conservation and need not result in any displacement of existing residents;

2. Underline the importance of historic preservation as a strategy for reuse of the existing housing, stressing the advantages of better construction, larger spaces, and greater livability of older homes;

3. Ensure that rehabilitation programs be carried out without damaging the integrity of historic structures by inappropriate alterations;

4. Provide that new housing in historic areas be used as infill and that it complement historic structures;

5. Call for the development of criteria to guide new construction into a form and style compatible with the existing context;

6. Modify code enforcement programs so that code compliance does not conflict with the intent of historic preservation.

In the related areas of conservation and open space planning, the County could try to:

1. Link natural and manmade resources as complementary and vital scarce resources;

2. Insist that, in the management, development, and utilization of natural resources, protection of cultural resources will be given first priority.

3. Direct programs for the protection of existing open space and/or acquisition of new open space to locations most closely related to identified cultural properties to provide buffer space and to preserve historic settings;

4. Affirm the indivisible relationship of both open space and cultural properties as limited resources necessary to the well-being of the community;

5. Provide for the protection of archaeological sites or fragile historic sites by placing them within open space classifications.

And finally, in the areas of seismic safety, noise and safety planning, the County could:

1. Call for review of seismic safety standards in order to prevent unnecessary alteration of the historic or design integrity of older buildings and districts;

2. Recommend that alternative codes for historic structures be developed and utilized when possible and practicable, and that the State

Historic Building Code, when issued, be adopted as local policy;

3. Consider adoption of ordinances to minimize the danger of falling objects such as parapets;

4. Coordinate with a base map of cultural resources so that the scenic beauty intent of the element does not damage the livability of historic areas by causing traffic overloads;

5. Coordinate scenic easement acquisitions and development controls with the locations and design criteria of historic properties;

6. Adapt safety standards to sensitize these standards and their effect on the integrity of historic sites and structures;

7. Study and coordinate the location of public safety facilities in conjunction with the intent of Historic Preservation."

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VENTURA COUNTY GENERAL PLAN
RESOURCES APPENDIX-FIGURE 1.8.1

archaeological sensitivity map

VERY SENSITIVE –
HIGH LIKELIHOOD OF ARCHAEOLOGICAL SITES

SENSITIVE –
LIKELY TO CONTAIN ARCHAEOLOGICAL SITES

NOT TO SCALE

SOURCE: N. NELSON LEONARD, III
CHIEF ARCHAEOLOGIST ARCHAEOLOGICAL SURVEY
UNIVERSITY OF CALIFORNIA, LOS ANGELES (JULY 14, 1973)

NOTE: THIS MAP ONLY REFLECTS GENERALIZED ARCHAEOLOGICAL SITE SENSITIVITY AREAS, AND IS NOT INTENDED TO REPRESENT ACTUAL SITE LOCATIONS OR TO BE USED IN THE ENVIRONMENTAL REVIEW PROCESS FOR LOCATIONAL PURPOSES.

NORTH HALF NOT MAPPED

FIGURE 1.8.2

VENTURA COUNTY HISTORICAL LANDMARKS

Landmark Number	Site Name/Location/Declaration Date
1.	Faulkner Home - 8/5/68 (a), Telegraph Rd., Santa Paula
2.	Designation rescinded - 12/13/77, (formerly Edwards Abode, Saticoy)
3.	Eucalyptus Trees - 10/2/78, Hwy. 101 East of Camarillo, Camarillo
4.	Cook's Mansion (aka Piru Mansion) - 1/20/69 (b), No. Part St., Piru
5.	Rancho Arnaz Abode - 1/20/69 (a), 9504 No. Ventura Ave., Oak View
6.*	De la Guerra Adobe (aka Strathearn's Home) - 1/20/69, Strathearn Historical Park, 137 Strathearn Pl., Simi Valley, *Placed on National Register, 3/3/78
7.	Sanchez Adobe - 4/21/69 (a), Saticoy
8.	Camarillo Home - 4/21/69 (a), Mission Oaks Blvd., Camarillo
9.*	Santa Clara "Little Red" Schoolhouse - 4/21/69 (b), East of Santa Paula
10.	De la Guerra Abode Ruins - 12/14/70 (b), Tapo Canyon, Simi Valley
11.	Site of Santa Gertrudis Asistencia Chapel Foundation Stones, Off Hwy. 33, North Ventura
12.*	Ventura County Courthouse (currently San Buenaventura City Hall) - 12/14/70, 501 Poli St., Ventura - (c) State Historical Landmark No. 847, *Placed on National Register, 8/19/71
13.*	Oxnard Carnegie Library (aka Oxnard Public Library, currently serves as the Carnegie Cultural Arts Center) - 2/3/71, 424 South C St.,Oxnard, *Placed on National Register, 7/27/71
14.	Point Mugu Recreation Area/State Park - 2/3/71, Highway 1, Point Mugu
15.	Naumann Giant Gum Tree and Eucalyptus Grove - 6/7/71, 700' east of intersection of Pleasant Valley Rd. and Etting Rd., Oxnard
16.	Sugar Beet Factory Site - 6/7/70, Bordered by Wooley Rd. on south, Industrial Ave. on east, Driffill (warehouse) Blvd. on north and Factory Land on west, Oxnard
17.	The Pagoda - 6/7/71, In center of Oxnard Plaza Park at Fifth St. between B and C Sts., Oxnard
18.	Japanese Cemetery - 6/7/71, East of junction of Etting Rd. and Pleasant Valley Rd., Oxnard
19.	Port Hueneme Improvement Club - 11/15/71, 239 Scott St., Port Hueneme
20.	Bard Memorial, West side of Ventura Rd. at Park Ave., Port Hueneme
21.	Reyes Adobe - 11/15/71 (a), Located north of Ojai in the Lockwood Valley (two miles from Route 33)
22.	Saint Mary Magdalen Church - 4/3/72, 2532 E. Ventura Blvd. (chapel in front of St. Mary Magdalen School), Camarillo
23.	The Southern Pacific Railroad Depot - 4/3/72, 963 E. Santa Barbara St., (Northwest corner of Tenth St. and Santa Barbara St.), Santa Paula
24.	The Site of the Original Hueneme Wharf - 4/3/72, Southwest corner of Port Hueneme Rd. and Seaview St., Port Hueneme
25.	Matilija Hot Springs - 8/7/72, Approximately seven miles northwest of Ojai on Route 33 near Matilija Lake, Ojai
26.	Post Office Tower and Portico - 6/30/75, Southeast corner of Ojai and Signal Sts., Ojai
27.	Libbey Park Bowl Sycamore - 6/30/75, Libbey Park, Ojai
28.*	Mission Aqueduct (aka San Buenaventura Aqueduct) - 1/6/76 (b), off Canada Larga Rd., Ventura, *Placed on National Register, 3/7/75
29.	Santa Susana Southern Pacific Railroad Depot - 1/6/76, 6503 Katherine Rd. (north edge of Santa Susana Park), Simi Valley
30.*	The Stagecoach Inn (aka Grand Union Hotel) - 5/30/76, 51 So. Ventu Park Rd., Newbury Park (near Landmark No. 44) - (c) State Historical Landmark No. 659, *Placed on National Register, 12/30/75
31.*	Bard Home (aka Berylwood, aka The Thomas Bard Estate) - 11/22/76 (b), On Guadalcanal at Bard Lane, U.S. Naval Construction Battalion Center, Port Hueneme, *Placed on National Register, 9/15/77
32.	Hueneme Bank Building (aka Port Hueneme Historical Museum) -11/22/76, 220 No. Market St., Port Hueneme

33. Keene Home - 1/3/77 (b), Bell Way, Ventura
34. Foster Park Lion Entrance Markers - 1/3/77, 438 Casitas Vista Rd., Foster Park, Ventura
35. W. L. Hardison Home - 12/5/77 (b), Ojai Ave., Santa Paul
36. First Union Oil Company Building (aka California Oil Museum) - 12/5/77, 1003 E. Main St., Santa Paula
37. Former Port Hueneme Slough - 11/23/77, Part of Moranda Park, bordered by Santa Cruz St., Ventura County Railroad, Avalon St. and Flood Control, Port Hueneme
38. Universalist Unitarian Church - 2/6/78 (b), 740 E. Main St., Santa Paula
39. Mill Park - 8/7/78, Hwy. 150 (west side) at Bedford Street, Santa Paula
40. Original Simi Library Building - 3/6/78, 137 Strathearn Place, Strathearn Historical Park, Simi Valley
41.* Haigh-Talley Colony House - 3/6/78, 137 Strathearn Place, Strathearn Historical Park, Simi Valley, *Placed on National Register, 9/18/78
42. Tapo Citrus Association Packing House Site - 3/6/78, (Current site of new Civic Center), 3855 Alamo St., Simi Valley
43. The Hill Ranch Brick Cistern - 5/1/78 (a), Wildwood Park, Thousand Oaks
44. Sycamore Tree (near Stagecoach Inn) - 5/1/78, 51. So. Ventu Park Rd., Newbury Park (Near Landmark No. 30)
45. Pederson House and Water Tower - 5/1/78 (b), On campus of California Lutheran College, Memorial Parkway/Pioneer Ave., Thousand Oaks
46. The Tanner (Linville) Homestead - 8/15/78 (b), E. Telegraph Rd., Santa Paula
47. Bank of A. Levy (aka Fillmore State Bank) - 5/8/79, 316 Centra Ave., Fillmore
48. Fillmore Historical Museum (aka Southern Pacific Depot) - 5/18/79, 447 Main St., Fillmore
49. Trinity Episcopal Church - 5/8/79 (b), 608 Saratoga St., Fillmore
50. Bardsdale Methodist Church - 4/24/79 (b), 1498 Bardsdale Ave., Fillmore
51. Piru Methodist Church and Organ - 4/24/79 (b), 227 Center St., Piru
52. Grandma Prisbrey's Bottle Village - 6/5/79, 4595 Cochran St., Simi Valley - (c) (Closed to public until renovations are complete)
53. Brandeis Institute's The House of the Book - 5/29/79 (b), 1101 No. Pepper Tree Lane, Simi Valley
54. Teague Mansion and Originally Developed Grounds - 11/5/79 (a), McKevette Heights Rd., Santa Paula
55. Moorpark First Baptist Southern Church (formerly Epworth and Simi Churches) - 10/23/79 (b), 702 Walnut, Moorpark
56. Bank of A. Levy - 11/6/69, 143 W. Fifth St., Oxnard
57. Port Hueneme Lightworks (light beam fixture in the lighthouse), Port Hueneme
58. Arundell House - 7/29/80 (a), Pole Creek Canyon, Fillmore
59. Artists' Barn and Surrounding Grounds, Including 100-Year Old Pepper Tree - 7/8/80 (a), Bard St., Fillmore
60. Community Church of Fillmore (formerly the Church of Christ Scientist) - 7/8/80 (b), 461 Third St., Fillmore
61. Odd Fellows' Clock (aka The Town Clock) - 7/7/80 (b), Main St. at Davis St., Santa Paula
62. Ojai Historical Museum (formerly County Fire Station No. 21) - 9/9/80, So. Montgomery St., Ojai
63. Jungleland Site - 3/3/81, Conejo School Rd. and Thousand Oaks Blvd., Thousand Oaks
64. Hunt Olive Tree - 1/25/82, Hillcrest Dr. and Lynn Rd., Thousand Oaks
65.* The Glen Tavern - 7/6/81, 134 No. Mill St., Santa Paula, *Placed on National Register, 7/26/84
66. Saint Rose of Lima Catholic Church - 6/22/81 (b), Corner Third and Pacific Sts., (southwest corner), Simi Valley
67. Simi Valley Community Methodist Church - 7/27/81 (b), 3050 Los Angeles Ave., Simi Valley
68. The Main House, Brandeis/Bardin Institute - 7/14/81 (b), 1101 Peppertree Lane, Simi Valley
69. The Mill - 5/3/82, 212 No. Mill St., Santa Paula

70. Church of Religious Science (formerly the Church of Christ Scientist) - 3/3/82, 200 South D St., Oxnard
71. Patterson Ranch Buildings - 7/14/81 (a), Bennett Rd., Simi Valley
72. High Street Pepper Trees - 10/20/81, High St., Moorpark
73. Declaration refused by owner (Santa Clara Catholic Church in Oxnard was the proposed landmark)
74. Henry Levy House - 3/1/82 (a), 155 So. G St., Oxnard
75. Achille Levy House - 3/1/82 (a), 201 So. D St., Oxnard
76. Ebell Club (aka Santa Paula Women's Club) - 5/3/82 (b), 125 So. Seventh St., Santa Paula
77. Teague House - 7/12/82 (a), E. Santa Paula St., Santa Paula
78. Underwood House - 5/3/82 (b), Santa Paula St., Santa Paula
79. Moreton Bay Fig Tree - 7/12/82, Santa Barbara and Tenth Sts., Santa Paula
80. Rice House - 7/12/82 (a), Yale St., Santa Paula
81. First Christian Church - 7/12/82 (b), 829 Railroad Ave., Santa Paula
82. Balcom House - 7/12/82 (a), Pleasant St., Santa Paula
83. Baker House - 7/12/82 (a), E. Main St., Santa Paula
84. Anna M. Logan House - 7/12/82 (a), No. Mill St., Santa Paula
85. Declaration refused by owner (Whiteside House and Barn in Thousand Oaks was the proposed landmark)
86. Maranda Home (aka Fred Gerberding Home) - 10/4/82 (a), No. Third St., Port Hueneme
87. Farrell Home - 10/4/82 (b), Naval Construction Battalion Center, Port Hueneme
88. Richard Bard Home - 10/4/82 (b), Naval Construction Battalion Center, Port Hueneme
89. Chumash Wilderness Park - 12/6/82 (b), "Indian Hills", Simi Valley
90. Oakbrook Regional Park Archaeological District - 2/7/83 (b), Thousand Oaks
91. Chumash Village of Shimiji - 5/9/83, 137 Strathearn Pl., Strathearn Historical Park, Simi Valley
92. Ramello-Willett House (currently known as Rose Holme, a resort bed and breakfast) - 6/6/83 (b), Sulphur Mountain Rd., Ventura
93. Wood Ranch Barns - 6/6/83, 863 Madera Rd., Strathearn Historical Park, Simi Valley
94. Lathrop Camp (aka Rainbow Valley Ranch, aka Circle B Ranch, aka Hotel Sespe) - 7/31/84 (b), 19737 Rainbow Valley Road, (on the Upper Sespe 3 miles east of Hwy. 33 on the Rose Valley, Piedra Blanca Rd. and 2 miles north of that road), Ojai
95. Pratt House, Ojai - 11/26/85, Foothill Rd., Ojai
96. Dent House, Ojai - 9/10/85, 4101 Matilija Canyon Road, Ojai
97. Santa Paula High School, Santa Paula - 2/19/86, 404 North Sixth Street, Santa Paula
98.* Wiltfong Home, Port Hueneme, 309 N. Second Street Port Hueneme, *Recommended by CHB but pending approval by City of Port Hueneme
99. Dos Vientos Ranch Buildings, Newbury Park - 5/6/86, West Potrero Road, Newbury Park (pending annexation to Thousand Oaks)
100. Justin Petit Family Home, Oxnard - 4/8/86, 1894 Wooley Road, Oxnard
101. Piru Train Bridge - 6/24/86, Piru Creek, Piru
102. Sacred Heart Mission Church - 6/24/86, Wells Road and Sixth Street, Saticoy
103. Whale Rock Ranch - 9/9/86, 2116 & 2114 McNell Road, Ojai
104. Stagecoach Road - 10/21/86, The approach to the east end of Smith Road from Kuehner/Santa Susana Rd., Simi Valley
105. Freight Road - 10/14/86, The approach to the east end of Smith Road from Kuehner/Santa Susana Rd., Simi Valley
106. Mt. McCoy and Cross - 10/14/86, A small portion of Parcel No. 500-400-13, the crown of Verde Hill, Simi Valley
107. Montgomery Home - 12/15/86, 182 Highland Avenue, Simi Valley
108. King Home - 10/21/86, 1420 Grimes Canyon Road, Fillmore
109. Crowley House - 12/16/86, 2224 Pleasant Way, Thousand Oaks
110. Five Trees - 01/20/87, Hills overlooking Ventura
111. McKevett School - 05/87, 955 East Pleasant Street, Santa Paula, CA 93060
112. Janss House - 7/87, 482 Greenmeadow Dr., Thousand Oaks

113. Sheldon House - 9/87, 701 E. Santa Paula Blvd., Santa Paula
114. Sharp House - 10/87, 11840 W. Telegraph Rd., Santa Paula
115. Hueneme Elementary School - 9/87, 344 N. 3rd St., Port Hueneme
116. Whiteside House & Barn - 10/87, 1388 W. Portrero Rd., Thousand Oaks
117. Walnut Growers Assn. Warehouse - 6/88, 1235-55 E. Wells Rd., Saticoy
118. Saticoy Bean Warehouse - 5/88 (b), 10995 Azahar St., Saticoy
119. Farmers & Merchants Bank - 6/88, 1203 Los Angeles Ave.,RSati2ø¥10/91
120. Lake Eleanor Dam - 5/88, Eleanor Creek, S. Westlake Bl., Thousand Oaks
121. Foster Bowl - 11/88, 438 Casitas Vista Rd. (Foster Park), Ventura
122. Palm Trees on Chambersburg Road - 12/88, South of Guiberson Rd., Fillmore
123. Sanitary Dairy - 2/89, 1680-86 Old Telegraph Rd., Fillmore
124. Piru Hotel - 3/89, 691 N. Main St., Piru
125. Lechler Residence/Museum - 6/89, 3886 Market St., Piru
126. The Hall Ranch - 9/89, 11999 Ojai-Santa Paula Rd., Ojai
127. Pioneer Section, Simi Public Cemetery - 1/90, 1461 Thompson Ln., Simi Valley
128. Pending
129. Masonic Temple - 6/90, 402 Central Ave., Fillmore
130. Farmers & Merchants Bank - 4/90, 364 Central Ave., Fillmore
131. Sespe School - 4/90, 627 Sespe Ave., Fillmore
132. Familia Diaz Cafe - 10/90, 249 S. 10th St., Santa Paula
133. Pending
134. Grant Coast Live Oak - 8/90, West of Peppertree Ln., South of Arroyo Simi, Simi Valley
135. Pending
136. Pending
137. Palm Trees Along Alamo Street - 8/90, Between Sycamore Dr. & Tapo Canyon Rd., Simi Valley
138. Sycamore Tree, Wood Ranch Parkway - 8/90, In Center Divider, South of Martha Morrison Rd., Simi Valley
139. Simi Elementary School & Bungalows - 8/90, 2956 School St., Simi Valley
140. Scott/Cameron House & Olive Tree - 8/90, 2043 Royal Ave., Simi Valley

VENTURA COUNTY DECLARED POINTS OF INTEREST

1. Hopetown Movie Ranch (historically known as "Corriganville") - 1/19/82, 1601 Keuhner Dr., Simi Valley
2. Old Butterfield Grade - 1/4/82, Summit of the grade is located approximately one half to one mile south of point on Moorpark-Santa Rosa Rd., about 2 to 3 miles from intersection of Moorpark and Olsen Roads.
3. Port Hueneme Insectary Site - 5/20/85, Bounded by Scott St. on the north, Fifth St. on the east and Port Hueneme Rd. on the south, Port Hueneme
4. Santa Rosa School Site and School Bell - 2/24/87, Santa Rosa Road Camarillo, CA
5. Original Hueneme Grammar School Site - 1/88, 344 N. 3rd St., Port Hueneme
6. Saticoy Springs & Chumash Indian Village, Sa'aqtik'oy Site - 5/88,Telephone Rd. & Saticoy Ave., Saticoy
7. Simi School/Library/Ortega Saloon Site-6/89, 1958 3rd St., Simi Valley
8. The Original Santa Clara Chapel Site - 11/89, Sears Building, Esplanade Mall, 301 Esplanade Dr., Oxnard

FOOTNOTES

a. Private ownership. Do not disturb. Address is confidential.
b. Private ownership. Shown by appointment only. Owner prefers that street address not be published. (Address is on file at offices of General Services Agency.)
c. State of California Historical Landmark.
*Listed on the National Register of Historic Places.

R. 12/10/91

1.9 ENERGY RESOURCES

According to California General Plan Guidelines, 1980: "There is little question that the United States has an energy problem. The growing scarcity of traditional energy sources and the actions of the oil- producing and exporting countries have driven the price of oil, natural gas, and electricity rapidly upward. Price is the barometer to which consumers and governments are most sensitive. With the price of natural gas, electricity, and gasoline rising much faster than the rate in inflation, energy claims a bigger and bigger share of household and government budgets. Conservation, in this context, becomes not just an obligation, but an economic necessity. Because conserving energy now costs far less than purchasing it, measures to achieve conservation can reduce present costs and keep future costs down. Planning now for efficient buidings, land use, and transportation patterns is the best hedge against an uncertain and expensive energy future."

Statewide energy consumption patterns are reflected in the table below.

Figure 1.9.1 CALIFORNIA ENERGY - SOURCE/USE

Use of Primary Energy Sources and Electricity by Sector and Percent of Total Supply in 1977

	Transportation	Residential	Non-Residential	Total
Petroleum	41%	19%	2%	62%
Natural Gas	*	15%	11%	26%
Electricity	*	8%	4%	12%
Total	41%	42%	17%	100%

*negligible

Source: "Energy Choices for California... Looking Ahead" Introduction to the 1979 Biennial Report of the California Energy Commission, March 1979, in California General Plan Guidelines, 1980.

The following sections discuss energy use and energy conservation.

1.9.1 ENERGY USE

Ventura County relies primarily on an interrelated energy system. Electricity and natural gas are the primary forms of household energy while petroleum fuels are the primary energy source for most modes of transportation. The utilization of each of these energy sources raises energy resource availability, environmental and conservation issues.

Electricity in Ventura County is supplied by the Southern California Edison Company. Edison's principal sources are the Mandalay and Ormond Beach Generating Stations. These power plants burn oil and gas primarily from local off-shore wells.

Edison's distribution of electricity (for the entire service area) is shown in the table below.

- Figure 1.9.2 - ELECTRICITY USE BY CLASS OF SERVICE, 1986

Class of Service	% of 1986 total	Kilowatt-hours (in Millions) 1986	1985	% Change
Commercial	31.4	20,145	19,111	5.4
Residential	29.2	18,767	18,583	1.0
Industrial	24.3	15,588	15,707	(0.8)
Public Authorities	7.9	5,078	4,885	3.9
Agricultural/Others	1.3	853	1,016	(16.0)
Total Retail Sales	94.1	60,431	59,302	1.9
Resale to Cities	4.4	2,789	3,875	28.0)
Sales to Other Utilities	1.5	977	1,808	(46.0)
Total Other Sales	5.9	3,766	5,683	(33.7)
Grand Total	100.0	64,197	64,985	(1.2)

Source: Southern California Edison, 1986 Annual Report.

The County's petroleum resources are discussed in Section 1.4, Mineral Resources. Two uranium deposits have been located in the Los Padres National Forest, but have never been developed. The Sespe Hot Springs and vicinity along Sespe Creek, with seven thermal springs identified, is considered a Federal Geothermal Resource Area.

The Statewide distribution of petroleum use is shown in the table below.

Figure 1.9.3 - CALIFORNIA PETROLEUM USE: 1984

Motor Gasoline	40%
Diesel Fuel	10%
Aviation Fuels	11%
Residual Fuels (Marine)	13%
Total Transportation Uses	74%
Industrial	24%
Commercial	1%
Electric Power Plants	1%
Total Other Uses	26%

Source: Save Energy No. 17 (1987), Calfiornia Energy Extension Service

1.9.2 ENERGY CONSERVATION

Energy conservation offers a low cost means of forestalling costly development of new energy resources. Energy conservation often offers the ancillary benefits of decreasing pollution and waste production and reducing road congestion.

Energy conservation measures may be divided into three main categories:

- Automobile use reduction
- Energy consumption reduction
- Utilization of alternative energy sources

Automobile use reduction can be achieved through efficient land use planning to reduce the distances between home-work-shopping-recreation and reducing the need for individual automobile use. Providing means of alternative transportation such as public transit, bicycle paths and carpooling is another avenue of energy conservation.

Energy consumption reduction involves tactics such as energy efficient appliances, extra insulation of buildings, smaller cars, waste recycling, and design of projects and buildings to minimize need for heating, cooling and lighting (including decreasing "heat sinks" by decreasing parking lot and street size and planting landscaping).

Alternative energy use includes solar, wind, hydroelectric and geothermal energy, biomass conversion and cogeneration/waste heat reuse. Use of solar lighting and heating is easily incorporated into building design. Large scale commercial use of solar, wind and geothermal energy to generate electricity is currently being pursued throughout the State.

Cogeneration/waste heat reuse is presently being used in small and large industrial projects.

1.9.3 CONCLUSIONS

- Conservation of nonrenewable energy sources is a local, State and National goal.

- Energy can be conserved through automobile use reduction, energy consumption reduction and alternative energy use. County goals, policies and programs should call for energy conservation in land use and development and in public facilities.

REFERENCES CONSULTED

Governor's Office of Planning and Research, General Plan Guidelines, 1980 and 1987.

Governor's Office of Planning and Research, Save Energy, 1987.

Southern California Edison Company, 1986 Annual Report.

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1.10 COASTAL BEACHES AND DUNES

This section discusses beaches and dunes as a resource worthy of conservation. The value of beaches and dunes is described, followed by a discussion of beach formation and degradation. Section 2.11 of the Hazards Chapter deals with Coastal Wave and Beach Erosion, a phenomenon which is often a consequence of failure to conserve beach and dune resources.

1.10.1 VALUE OF BEACHES AND DUNES

The majority of the Ventura County coastline is sheathed in a protective belt of sandy beach. Beaches and dunes form a protective buffer from the processes of storm and wave erosion. Due to their non-rigid nature, beaches and dunes dissipate energy yet incur little damage. Naturally occurring buffer zones (such as coastal sand dunes) are generally much more effective at reducing wave damage and protecting the coastline than are man-made protective devices (Department of Navigation and Ocean Development, 1979).

In addition to their protective properties, beaches have significant value as a recreation resource. Numerous State, County, city and private beaches are located up and down the coast (see Sec. 4.10, Public Facilities and Services Appendix) and are used extensively by County residents and tourists alike. Ventura County also offers some of the best surfing areas in Southern California. Surf breaks are dependent on maintenance of sandy beaches and several have been lost due to beach degradation.

Beaches and dunes also provide habitat for a wide variety of flora and fauna, many of which are not found elsewhere. In addition to protecting man-made developments, dunes protect coastal salt marshes and wetlands. Dunes provide a nesting habitat for the snowy plover and the California least tern, (a Federal endangered species) and provide roosting habitats for a number of other shore birds.

Coastal dunes are an increasingly rare landform in California. Coastal dunes are formed in areas where local erosional, wind and topographic features have caused sand to accumulate in a series of low hills. Coastal dunes are generally divided into a) foredunes, small hillocks directly facing the ocean, and b) backdunes, usually several series of hills that are higher and more continuously vegetated than the foredunes.

Coastal dune communities support a variety of coastal strand flora including sand verbena, sea rocket, sea fig and other species. Dune vegetation is particularly important to the maintenance of dune habitats, insofar as the vegetation serves to stabilize the dunes and promote dune formation. Many of the plants found in the coastal dune habitat have unusual characteristics that permit them to grow in this relatively harsh environment. Some of these adaptations, such as a low-spreading form and extensive root systems, are important in producing and stabilizing the dunes. Vegetative cover causes wind-blown sand to accumulate, and prevents further sand movement.

The habitat characteristics as well as the protective characteristics of dune communities can be easily altered by human activities, especially development and off-road vehicle use. Additionally, because of the fragility of such plant communities, unrestricted pedestrian access may, on a cumulative basis, result in the trampling of dune vegetation and ultimately, the degradation of the community and "blowout" of the dunes. A single severe winter storm can cause significant dune migration.

The County's major dune communities are found in the McGrath-Mandalay area, Ormond Beach on the South Coast near Point Mugu State Park, and near the mouths of the Ventura and Santa Clara Rivers. In the Mandalay vicinity, some dune areas have been stabilized by the introduction of European beach grass and iceplant.

Dune formations on the coast are also dynamic in nature, migrating and reforming depending on wind and wave patterns and coastal topography. Development in the vicinity of dunes is, therefore, often subject to sand encroachment and the costs of street sweeping, sand removal, storm run-up and damage.

1.10.2 BEACH FORMATION/DEGRADATION

Sandy beaches are nourished largely by the weathering of coastal bluffs and dunes, and by river transport of sediment to the sea. Ventura County has three major sources of beach sand: the Santa Clara River (contributing 60%), the other rivers and streams (10%), and beaches upcoast of Ventura River (30%). It is estimated that 30% of the river-borne sediment transported to the Coast is sand and that one-fourth of all sand produced by land surface erosion is eventually delivered to the shore (Scripps Institute of Oceanography in Survey for Beach Erosion Control, Army Corp of Engineers, 1980). The total volume of sand contributed by these sources is estimated to vary from 200,000 to 1,700,000 cubic yards or 1,000,000 cubic yards per year average (Ventura County Flood Control District, 1979).

Ventura County is part of the South Coast littoral cell. A littoral cell is defined as a section of coastline where the transport of sediment is isolated from adjacent sections of the coastline. A cell is composed of one or more sediment sources, and sediment sinks. The beach acts as a conduit between the sources and sinks. The South Coast littoral cell runs from the mouth of the Santa Ynez River, north of Point Conception, to the Mugu Submarine Canyon, near the mouth of Mugu Lagoon.

Sediment sources, which include dune and cliff erosion and silt from rivers and streams, add to the net volume of sand within the littoral cell. Losses, which include transport down submarine canyons, wind transport into onshore sand dunes, and sand impoundment in lagoons and harbors, reduce the net volume of sand within the cell. Under normal conditions, longshore and on-offshore transport neither adds to nor subtracts sand from the cell. Instead, the longshore transport carries sand through the cell while the on-offshore transport modulates the width of exposed sand beach.

Within the South Coast littoral cell, major sand sources include the Santa Ynez, Ventura, and Santa Clara Rivers. Minor sources include cliff erosion and the numerous streams within Santa Barbara County. Major sand sinks for the littoral cell are Hueneme and Mugu Submarine Canyons, while minor sinks include the sand dunes near the mouths of the Santa Ynez and Santa Clara Rivers. In principle, the Santa Barbara, Ventura, and Channel Islands harbors act as temporary sand sinks, however, in reality all of them have collected semi-permanent volumes of sand since they were built.

Prevailing ocean waves cause the net sand transport to be from the northwest to southeast. Temporary reversals in the direction of sand transport do occur, primarily during the late summer months. Nevertheless, sand entering the littoral cell at the mouth of the Santa Ynez River eventually makes its way through the cell and is finally lost into the Mugu Submarine Canyon (South Coast Regional Beach Erosion Control Group, 1986).

Though coastal erosion is a natural process, man's actions have exacerbated the problem. Construction of the Santa Barbara, Ventura, and Channel Islands harbors has created sediment sinks. To the degree that these harbors are not fully dredged on a continuing basis, they contribute to downcoast beach erosion. Construction of flood control structures and reservoirs on the rivers and streams in Santa Barbara and Ventura counties has reduced peak waterflows, indirectly reducing the amount of sand reaching the coast. In addition, sediment that is impounded behind the dams cannot reach the coast. Extreme rainfall years with heavy runoff produce a disproportionate amount of sand supply to the coast. For the past several decades weather patterns have been unusually mild, thus large

influxes of sand have not reached coastal beaches. A gradual rise in sea level over the last century has reduced the size of the exposed sand beach. These causes have combined in different ways to produce an uneven pattern of beach erosion along the South Coast. Some of these causes, such as long-term weather patterns, are unavoidable, while others, such as flood control structures, represent a trade-off between conflicting public objectives.

BEACON (Beach Erosion Authority for Control Operations and Nourishment) was created in 1986 by a joint powers agreement between Ventura and Santa Barbara Counties and all the coastal cities to promote beach sand replenishment and coordinate government funding efforts to fight beach erosion. BEACON is presently studying the erosion problem and will release a study containing recommendations for further action.

1.10.3 CONCLUSIONS

- Beaches and dunes are valuable as shoreline protection, natural ecological habitat, and as recreation areas.

- The formation and degradation of beaches and dunes is a complex process greatly influenced by man's activity both on and off-shore. County goals, policies and programs should be adopted to protect and conserve dunes and beaches by regulating development which could have a deleterious effect on these resources, and by participation in regional programs of coastal conservation.

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South Coast Regional Beach Erosion Control Group, Pamphlet, 1986.

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appendix

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VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX

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VENTURA COUNTY GENERAL PLAN
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2. HAZARDS APPENDIX

2.1 INTRODUCTION

The purpose of this appendix is to provide additional background information and technical details regarding individual hazards addressed in the General Plan Goals, Policies and Programs. The physical, social and other effects of the hazards are discussed, and more detailed information is provided regarding the location of hazards zones and areas. Where appropriate, the factors that cause or produce certain hazards are discussed. In the case of geologically-related hazards, the tectonic and other geologic forces that produce such hazards are described. Information regarding the local history of specific hazards is included where appropriate, and any pertinent ongoing research is also mentioned. Measures used or recommended for alleviation of individual hazards are also included. In some cases, table and other data, as well as copies of pertinent documents, have also been appended.

The following hazards are discuss in this appendix, in the order shown.

2.2 Fault Rupture
2.3 Ground Shaking
2.4 Tsunami
2.5 Seiche
2.6 Liquefaction
2.7 Subsidence
2.8 Expansive Soils
2.9 Landslides/Mudslides
2.10 Airport Hazards
2.11 Coastal Wave and Beach Erosion
2.12 Flood Hazards
2.13 Inundation from Dam Failure
2.14 Fire Hazards
2.15 Hazardous Materials and Waste
2.16 Noise

The first five hazards in the above list are so grouped because they all tend to be seismically-related.

Maps of the hazards zones and areas can be found at the end of the individual sections.

2.2 FAULT RUPTURE

2.2.1 GENERAL EFFECTS OF THE HAZARD

Nearly all man-made structure are susceptible to damage ranging from severe to total when affected by displacement along faults passing beneath their foundations. The San Fernando Earthquake of 1971 has shown that not structures designed under present standards are safe from severe damage or destruction as a result of surface fault displacement of foundations. It is widely acknowledged that design of most structures, such as single-family homes or larger structures, roads, bridges, pipelines, or other conduits, to resist fault displacement is generally not feasible. Only massive earth structures such as earthfill dams can be designed to remains functional after several feet of displacement along an underlying fault.

Permanent effects of surface displacement along faults also can include:

1. Abrupt elevation or depression of ground surfaces of several feet for distances of many hundreds of feet along the fault;

2. Disruption of surface drainage;

3. Changes in groundwater levels in wells;

4. Blockage and surface seepage of groundwater flow;

5. Changes in survey benchmark elevations;

6. Dislocations of street alignments and property lines of many feet if lateral (horizontal) displacement also occurs along a fault;

7. Displacement of drainage channel and drains.

Secondary effects of surface displacements along faults within an urban area could include:

1. Disruption of movement along roadways due to abrupt depressions or elevation of pavement surfaces;

2. Possible flooding due to disruption of drainage channel and storm drain flow;

3. Disruption of utility services such as water, gas, fuel, telephone and electric power lines;

4. Temporary impact on industry and commerce similar to that resulting from the occurrence of most kinds of regional natural catastrophic events such as hurricanes or floods.

2.2.2 GENERAL INVENTORY OF THE HAZARD

The State Division of Mines and Geology (Urban Geology Master Plan for California, 1973, Bull. 198) indicates that on a statewide basis the potential hazard to structures from the surface displacement of faults is low compared to such geologic phenomena as earthquake shaking and landsliding. Historically, major losses due to fault displacement have been limited to the San Fernando Earthquake of 1971. Structural losses due to fault displacement have been limited to the San Fernando earthquake of 1971. Structural losses due to fault displacement in the 26 other major earthquakes in California are unknown but were probably small. Most of the losses incurred during the 1906 San Francisco Earthquake and 1953 Tehachapi Earthquake were caused by ground shaking and ensuing fires.

The greatest potential for fault activity is along any of the faults which lie within the several major fault systems which transect the County from east to west. The 1971 San Fernando Earthquake which occurred along one of these major fault systems illustrates the high level of activity that some faults within these systems may have, and foretells the occurrence of other such earthquakes in the Los Angeles, Ventura-Santa Barbara regions.

The San Fernando earthquake of 1971 may be an example of the typical type which could occur along some of the east-west trending faults which transect the County. Based upon that earthquake, it is most likely that a surface fault displacement within the County will be sudden, occurring over a period of less that one minute. The displacement would be accompanied by sharp ground shaking lasting perhaps several tens of seconds.

Many of the faults in the County are associated with major fault systems extending beyond County boundaries. Several of these faults and fault systems are considered to be active, but a great deal f additional information must be assembled to determine the potential for, as well as the nature of, activity of most of the faults including those presently considered to be active.

The present level of knowledge of the recency of surface or near surface movement along the faults within Ventura County is not sufficient on which to base a firm determination of the "degree" of activity of most of these features. There is some evidence that some of the known faults have displaced at least late Quaternary terrace sediments, indicating possible movement as recent as 11,000 years ago. This is the primary basis for designating the most recently active faults, as these could have the higher potential of future movement.

Any of the fault designations within the County are subject to change as further evidence is received, within indicating clearer proof of potential for activity or providing convincing geologic evidence of inactivity. The following is a description of the major active and potentially active faults and fault systems within Ventura County (also see Figures 2.2.1a and b).

Malibu-Santa Monica-Raymond Fault System

This fault system is believed to consist of a series of major north-dipping thrust faults which extend along the coast and onshore in Los Angeles County for a total of over 40 miles and perhaps a much greater distance offshore in the Santa Barbara Channel. I begins in the San Bernardino area and extends along the southern base of the Santa Monica Mountains and passes offshore a few miles west of Point Dune.

Geologic evidence for activity of the fault system during recent geologic time up through the present are faulted terrace and near surface sedimentary deposits, groundwater barriers and the 1973 Point Mugu earthquake, which is believed to have originated on the Malibu Fault.

The faults within this system are considered active.

Simi-Santa Rosa Fault

This fault is associated with reverse or high angel thrust movement. From the Santa Susana Mountains westward along the northerly margin of the Simi and Tierra Rejada Valleys, along the south slope and crest of the Las Posas Hills to their westerly termination. The presence of the Springville and Camarillo Faults short distances to the north and south, respectively, of the westerly projection of Simi-Santa Rosa Fault suggest a relationship to these faults which project into the Oxnard Plain along the trend of the subject fault.

Surface evidence north of Simi Valley indicates that at least the easterly portion of this fault has been active during Pleistocene time (11,000 to 3,000,000 years before present). However, available information is considered insufficient to conclude that westerly portions of the Fault have not been active during the Pleistocene or more recent time. No earthquake epicenters of magnitude 4.0 or greater (Richter Scale) have been recorded along the fault during historic time.

The fault is designated as potentially active until more information is available for evaluation.

Bailey Fault

This fault marks the boundary between the western Santa Monica Mountains and the Oxnard Plain. It extends from the Mugu Lagoon area northerly to an apparent intersection with the Camarillo Fault near Calleguas Creek and State Highway 101. The presence of the fault is based primarily upon water well data.

No evidence of surface expression of the fault is known nor have any earthquakes been recorded as having originated on it. The fault trace is obscured by geologically young alluvium over its entire length. Available information is insufficient to conclude that the fault has not been active during Pleistocene or more recent time.

The fault is designated as potentially active until more information is available for evaluation.

Camarillo Fault

This fault extends in an east-west direction immediately south of Camarillo from Calleguas Creek to Camarillo Airport. The present of the fault is based primarily upon the apparent abrupt uplift along the north side of the fault and the linear uplift of the southern portion of Camarillo.

The apparent uplift of the north side of the fault is believed to be a surface expression of the fault. The fault trace, however, is obscured by geologically young alluvium over its entire length. Available information is insufficient to conclude that the fault has not been active during Pleistocene or more recent time.

The fault is designated as potentially active until more information is available for evaluation.

Sycamore Canyon and Boney Mountain Faults

These faults are the most prominent of a series of northeast trending breaks extending from the Point Mugu and south coast area to the Thousand Oaks area. Surface evidence of displacement of sedimentary and volcanic rocks of pre-Pleistocene age indicates that these faults have been active since deposition of those rocks. Younger rocks are not know to have been displaced by them. However, no specific investigations have indicated that displacement of younger deposits has not occurred. Special areas of concern would be in the Potrero, Conejo, and Hidden Valleys and the Thousand Oaks area.

The faults are designated as potentially active until more information is available for evaluation.

Oak Ridge Fault System

The Oak Ridge Fault is a steeply southerly-dipping reverse or thrust fault which extends from the Santa Susana Mountains where it has been overridden by the north-dipping Santa Susana Thrust Fault, westward along the southerly side of the Santa Clara River Valley and thence into the Oxnard Plain. The relationship of possible westerly extension of the fault to the McGrath and offshore faults is unclear and may be complex. None of the faults beyond the westerly terminus of South Mountain has surface expression nor has any been shown to cut near surface sediments. It is conceivable that past movement of these faults in the Oxnard Plain area has not resulted in surface displacements but, instead, has resulted in only broad warping or tilting of the near-surface alluvial sediments.

The Oak Ridge Fault System probably contains many branching faults and is believed to be associated with one or more faults of similar trend present in the Santa Barbara Channel west of the Oxnard Plain. The system is over 50 miles long on the mainland and may extend an equal or greater distance offshore.

The rugged, steep terrain of the north slope of South Mountain suggests that at least that portion of the Oak Ridge Fault is active. The lack of surface evidence of fault displacement in the Oxnard Plain is not necessarily indicative of past activity in the recent geologic past as surface features could easily have been obscured by fluvialite processes (erosion or deposition of alluvium). Several recorded earthquake epicenters in the offshore as well as mainland area during historic time may have been associated with the Oak Ridge Fault or others within close proximity and associated with it.

The fault system is considered active. Future information may result in portions being designated as inactive.

Ventura and County Club Faults

The Ventura Fault has been postulated to exist along the foothills on the north side of the Santa Clara River from Santa Paula westerly to the mouth of the Ventura River, thence westerly into the Santa Barbara Channel area. The possible existence of this fault as well as the nearby Country Club Fault northerly of Montalvo is reported in Geology, Seismicity and Environmental Impact (1973), a special publication of the Association of Engineering Geologists.

Evidence for the existence of the Ventura Fault is based mainly upon minor faulting of Terrace deposits north of San Buenaventura and evidence of faulting from the Tidewater Oil Company corehole #5. The fault is believed to be north-dipping. The existence of the Country Club Fault is based mainly upon discontinuities of water wells located in the Saticoy vicinity.

At present, sufficient information to verify the presence of past or potential future activity of these faults is lacking.

Future studies will provide information regarding existence and potential activity of these faults. It is considered prudent, however, to acknowledge the presence of these faults and consider them as potentially active, at least until further information is available.

Red Mountain-San Cayetano-Santa Susana-San Fernando Fault System

This fault system consists of a major series of north-dipping thrust faults which extend over 150 miles from Santa Barbara County into Los Angeles County. The system is associated with an intense zone of folded and faulted bedrock. relationships with the system become obscure over an eight-mile-wide gap between the Red Mountain and San Cayetano Faults where these north-dipping faults give way to several large, south dipping faults.

Geologic evidence that the fault system should be considered active throughout its length is shown by location of earthquake epicenters (including the San Fernando Earthquake of 1971), groundwater barriers, and displaced alluvial sediments. In addition, the

unusually high fluid pressures in the Ventura and San Miguelito oil fields are believed to indicate that tectonic stress has accumulated along that section of the fault system between the Red Mountain and San Cayetano Faults. It is possible that continued build-up of this stress will eventually result in sudden release, probably in the form of an earthquake resulting from movement along one or more of the faults within the Ventura County portion of the system.

Research has shown that the San Cayetano Fault has 20,000 feet of displacement several miles east of Ojai Valley. The epicenter of an earthquake of magnitude 4.0 to 4.4 (Richter Scale) was located above the San Cayetano Fault between Fillmore and Piru.

The system is considered active.

Lion Mountain-Big Canyon Faults

These faults and several others present in the eight-mile gap between the Red Mountain and San Cayetano Faults dip southerly beneath Sulfer Mountain. The general area is complexly broken and folded by faulting which may be associated with the high fluid pressures (stress) present in the Ventura Oil Field to the south.

Although the general area of these faults has not experienced earthquake activity during historic time, their position within the Red Mountain-San Cayetano-San Susana-San Fernando Fault System and the possible displacement of terrace deposits (Pleistocene time) indicates that they should be considered at least potentially active.

Arroyo Parida-Santa Ana Fault

This fault extends from Montecito to the Ventura River and probably along the south side of Ojai Valley. Evidence as to the direction of dip is conflicting.

Although no earthquake activity has been recorded during historic time the fault does apparently form a groundwater barrier in the alluvium beneath the Ventura River. On this basis, it should be considered potentially active. Future information may require reclassification.

Santa Ynez Fault

This fault extends from Point Conception in Santa Barbara County, across the central portion of Ventura County, to near the east County line. It is considered to be one of the major faults in the region and is about 90 miles long. Past displacement has been about 10,000 feet of relative uplifting of the south side of the fault. The fault lies about 4 miles north of Ojai.

Left lateral displacement of streams crossing this faults has been cited as evidence for recent fault movement. Several earthquake epicenters have been located along this fault and one or two of these were in Ventura County. The 1927 earthquake centered west of

Point Conception may have originated on the westerly, offshore extension of this fault.

This fault is considered potentially active until additional information is available for evaluation.

Faults Between the Santa Ynez and North County Line

Several large faults occur in the mountainous area north of the Santa Ynez Fault and within Ventura County. The most significant of these faults are the Tule Creek, Munson Creek, Agua Blanca, Fraizer Mountain and Big Pine Faults. Of these the more important appear to be the Pine Mountain Thrust and Big Pine Faults (9 and 16 miles north of Ojai, respectively). The Pine Mountain Thrust is north-dipping and favorably oriented for generating earthquakes in response to the north-south compressive forces which have triggered activity along such similar faults as the Malibu, San Fernando and San Cayetano.

Terrace deposits and stream channels have been offset by geologically recent movement along the Big Pine Fault. More importantly, it is reported to have ruptured the ground surface for a distance of 30 miles along its length during the northern Ventura County earthquakes of November, 1852.

Both of these faults are considered active. The rest of the faults in the north half are in the Secondary Fault Hazard Zone.

San Andreas Fault

The San Andreas is the longest and most important fault in California. Due to clearly established historical earthquake activity, this fault has been designated as active by the State Division of Mines and Geology. The last major earthquake generated of the County was in 1857. The earthquake is estimated to have been on the order of magnitude 8.0 (Richter Scale) and would have caused considerable damage if there had been any structures in the southern County area. The occurrence of another such major earthquake along this fault is considered possible within the near future.

2.2.3 LOCAL RESOURCES AFFECTED BY THE HAZARD

The unincorporated areas of the County may be substantially impacted by movement along faults. The effects are summarized in the accompanying table, following the text. Note: All transmission lines from power sources cross or enter into at least one fault zone.

One school is in the Arroyo Parida-Santa Ana Fault Zone, as is the water transmission line from Lake Casitas and Ventura to the Ojai area, which also crosses the fault zone. Sewer mains in the Meiners Oaks area and in Villanova Road are also located in the fault zone.

The Red Mountain - Padre Juan Fault Zone extends from Highway 33 near Canada Larga Road to the north coastal area of the County into the Pacific Ocean and Santa Barbara County. The coastal communities of La Conchita and Solimar are located int his zone, as is a county fire station on Highway 101 very close to or one the Padre Juan fault. Power transmission lines going to Santa Barbara County enter this fault zone as do many major gas lines, water transmission pipes and sewer mains.

North of Red Mountain-Padre Juan Fault Zone extends another secondary fault zone encompassing a portion of Highway 33, power transmission lines to Santa Barbara County and their associated substations in the area, and gas mains, water transmission lines and sewer mains on Ventura Avenue to Ojai.

The Lion Mountain Fault Zone is located between Lake Casitas and the San Cayetano fault zone east of Ojai. This zone contains the major portion of the Oak View community including Oak View and Arnaz schools and a County fire station. Major electrical transmission lines, gas mains, water transmission lines, and sewer mains between Oak View and Ojai transverse this zone.

The San Cayetano-Del Valle Fault Zone is located between the Los Angeles County Line and east of Ojai, entering into portions of the Piru Community and north of Fillmore and Santa Paula. Summit and Piru Schools are located in the fault zone as well as a fire station near Summit School on Highway 150. The State Fish Hatchery east of Fillmore is also within this primary hazard zone. Main power lines from Los Angeles County to the Santa Clara Transmission Station enter into this fault zone, as well as gas mains, water transmission lines, and sewer mains east of Ojai and Fillmore which are in the hazard zone portions of Piru.

The Big Canyon-Sisar Fault Zone extends west of the San Cayetano Fault Zone, south of Highway 150. Because it is located in hilly portions of the County, no major resources are affected.

Few major resources are located in the Eureka Canyon-Santa Susana Fault Zone, which is between the Oak Ridge Fault Zone and the Los Angeles County Line. However, major electrical transmission lines from Los Angles County to Moorpark and a 34" gas main does penetrate the fault zone.

The Simi Fault Zone extends from the Los Angles County Line, north of Simi Valley and ends up in the Virginia Colony area. A portion of a housing development is located within the fault zone as well as major power lines, gas mains north of Simi Valley, a water transmission line to Moorpark and a sewer main west of Simi Valley. Also, the Simi Valley Adventist Hospital is located within the fault zone.

No major resources are located within the Canada de la Brea Fault Zone, which reaches out from the Simi Fault. However, power transmission lines, an 8" gas main and a sewer line do enter into an extension fault zone of the Canada de la Brea fault.

Another fault zone is located east of Moorpark on a north-south orientation. Major power, gas, water, and sewer lines are located in this fault zone.

Another fault exists between Moorpark and Fillmore with Highway 23 bisecting the zone. Besides the roadway, only a six-inch gas line is located within the fault zone.

The Sycamore Canyon Fault rises from the Pacific Ocean near Mugu Lagoon, through the Santa Monica Mountains to Newbury Park, past the 101 Freeway into Thousand Oaks. Going through the Newbury Park area, four schools plus several utility facilities such as power lines to Lake Sherwood; gas mains near the 101 Freeway and Lynn Road; water transmission lines; and sewer mains are located in the fault zone.

The eastern extension breaks from the Sycamore Canyon Fault south of Borchard Road, touching Ventu Park Road and continuing on past the 101 Freeway further into Thousand Oaks. except for the general urban area which is located within the fault, there appear to be no major resources located within the area.

No major resources except for a power line to the Thousand Oaks sub-station appear to lie in the Boney Mountain Fault Zone, which is located south of the eastern extension of the Sycamore Canyon Fault.

The Bailey Fault Zone extends from Mugu Lagoon towards Camarillo and intersects the Santa Rosa fault zone east of that city. Major power lines from Ormond Beach power plant, as well as gas lines, water transmission pipes, and the Camrosa Wastewater Treatment Plant mains east of Camarillo are situated within the fault zone.

An extension fault zone is located due east of the Bailey Fault though camarillo state Hospital into the surrounding hills. The hospital lies directly in the fault zone.

The Santa Rosa Fault Zone starts east of the Springville Fault at Las Posas Road, following the Santa Rosa Valley until meeting the Simi Fault Zone near Highway 118. Within the unincorporated areas, major power lines from Ormond Beach power plant as well as gas and water mains are located in this fault zone.

An extension of the Santa Rosa Fault Zone is located north of its eastern portion terminating at the Simi Fault Zone. No major resources are situated within the zone.

The Springville Fault Zone extends north of Camarillo, through Oxnard to the Pacific Ocean. Near Camarillo, tow schools are located within the fault zone as well as the Mandalay Power plant in Oxnard. Also, major sewer, water, gas and electric lines enter into the fault zone.

The Oak Ridge Fault basically follows the Santa Clara River bed with a southern deviation near Fillmore. Due to this situation only utilities such as power, water, gas and sewer lines are major resources which enter into the hazard zone.

The accompanying table (Figure 2.2.2), "Resources Affected by Faults and Fault Zones," summarizes the information presented above.

2.2.4 DEFINITION OF FAULT HAZARD ZONES

The "fault hazard zones" define a boundary where active or potentially active faults are believed to be located.

2.2.4.1 Locally-Identified Fault Hazard Zones

The ese zones, based on available geologic data and the judgment of the County engineering geologist, are plotted on Figures 2.2.1a and b. Faults shown on the Fault Hazard Area Map, but not included in either the Primary or Secondary Fault Hazard Areas, are presently considered inactive.

The extent of Fault Hazard Zone boundaries are controlled by the traces of potentially active faults which are based on the best data available at the time the map was compiled. However, the faults shown on the maps were not field-checked during the compilation of these maps. Because available fault data are highly varied in quality and the location of some faults are known imprecisely, the zone boundaries have been positioned at a reasonable distance (about 660 feet or an eighth of a mile) from the trace of the nearest potentially active fault. However, zone boundaries generally are more or less than 660 feet away from mapped faults because of 1) curved or multiple fault trace, 2) the need to keep the number of turning points to a reasonable minimum, or 3) the quality of the data dictates a narrower or wider zone.

In many places the zone boundaries have been tentatively extended beyond the mapped limits of faults, such as occurs westerly of Camarillo and westerly of Saticoy. These zone extensions are considered necessary because, even though faults have not been mapped in these areas, it is considered likely that extensions of known faults or branches of faults do extend into these area. Future investigation or studies would be required for confirmation of any fault extensions.

The primary fault hazard zone designate area which are believed to contain <u>active</u> faults. The secondary fault hazard zones include those faults for which less evidence is available

concerning their potential for activity. More precise analysis requires further study. For the purposes of this Appendix, all primary and secondary fault hazard zones designated on Figure 2.2.1a and b should be considered equivalent to those established by the State for other faults within and outside of the County. No degree of relative potential for future surface displacement or degree of hazard is implied for the faults shown.

A "fault" is defined as a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side. Most faults are the result of repeated displacement which may have taken place suddenly and/or by slow creep. A "fault zone" is a zone of related faults which commonly are braided and subparallel, but may be branching and divergent. It has significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles.

2.2.4.2 State Special Studies Zones

In 1972, the California State Legislature enacted to Alquist-Priolo Special Studies Zones Act. Pursuant to this act, the "State Geologist shall delineate...special studies zones to encompass all potentially and recently active traces of the San Andreas, Calaveras, Hayward, and San Jacinto Faults, and such other faults...(that) constitute a potential hazard to structures from surface faulting or fault creep."

The Act also requires the State Geologist to compile maps of special studies zones and submit them to local jurisdictions. Areas containing special studies are shown on Figures 2.2.3a and b. The boundaries of individual zones are depicted on the 8000-scale Hazards Protection Map, on file in the County Planning Division.

The intent of the zone is to provide for public safety from the hazard of fault rupture by avoiding, to the extent possible, the construction of structures for human occupancy astride hazardous faults. The State Mining and Geology Board has adopted policies and criteria for the implementing of these zones. The complete text of the Policies and Criteria is included herein. Its most significant criterion is that no structure may be build across the trace of an active fault. Furthermore, the area within fifty feet of an active fault shall be assumed to be underlain by active branches and therefore, before any structure can be built within the zone, a geologic investigation and submission of a report be a geologist registered by the State of California are required. In addition, the County may impose more restrictive policies.

Special Studies Zones are delineated on topographic base maps at a scale of 1:24,000 (1 inch equals 2000 feet). The zone boundaries are straight-line segments defined by turning points.

Each turning point is identified by a number on the map for reference. Faults other than those depicted on the maps may be present within the Special Studies Zones. The zone boundaries delimit the area that the State Geologist believes warrants special geologic investigations to detect the presence or absence of hazardous faults.

Locations of special studies zone boundaries are controlled by the traces of potentially active faults, which are based on the best data available at the time the map was compiled. However, the faults shown on the Special Studies Zones maps were not field-checked during the compilation of these maps. Because available fault data are highly varied in quality and the locations of some faults are known imprecisely, the zone boundaries have been positioned at a reasonable distance (about 660 feet) from the trace of the nearest potentially active fault. However, zone boundaries generally are more or less than 660 feet away from mapped faults because 1) there may be curved or multiple fault traces, 2) it is necessary to keep the number of turning points to a reasonable minimum, and/or 3) the quality of the data may dictate a narrower or wider zone.

2.2.4.3 Uses and Limitations of the Hazard Zones

The best use of the fault zones is to define those areas within the zone as areas where special studies would be required prior to building structures for human occupancy. Such a criteria may require a developer or builder to evaluate specific sites within the zone to determine if a potential hazard from any fault whether heretofore recognized or not, exists with regard to proposed structures and their occupants.

Such studies should be required both for Primary and Secondary Fault zones. The latter should be included since future studies of these secondary zones could result in the redesignation of some of these to primary fault zones.

Users of the map should be fully aware that the zones are delineated to define those areas within which special studies may be required prior to building structures for human occupancy. Traces of potentially active faults are shown on the maps mainly to justify the locations of zone boundaries. These fault traces are plotted as accurately as the sources of data permit; yet the plots are not sufficiently accurate to be used as the basis for setback requirements.

Potentially active faults have been identified in a broad sense, although the evidence for the potential activity of some faults may be only weak or indirect.

The fault information shown on the map is not sufficient to meet the requirement for special studies. It is the County's responsibility to require the developer to evaluate specific

sites within the special studies zones to determine if a potential hazard from any fault, whether heretofore recognized or not, exists with regard to proposed structures and their occupants.

Secondary Fault Hazard Zones designate areas which may contain faults which should be considered potentially active. Future studies as well as experience could result in redesignation of some of these areas to Primary Fault Hazard Zones. Special studies, as required for Primary Fault Hazard Zones, should therefore continue to be required prior to approval of residential or other proposed permanent development within the Secondary Fault Hazard Zones.

Faults shown on the Fault Hazard Area map but not included in either the Primary or Secondary Fault Hazard Areas are presently considered inactive. In general, they are not considered to associated with the major, regional, potentially active fault zone trends. Special studies should, however, continue to be made of such faults prior to approval of any individual residential or other permanent developments which may be proposed over or in the near vicinity of any known faults.

2.2.5 NATURE OF THE INFORMATION

The geologic information relating to the location of faults and their potential for activity is based largely upon past regional geologic studies conducted by universities and petroleum geologists, as well as information compiled by the State Division of Mines and Geology and the County Department of Public Works. The most recent geologic information used was that covering the south half of the County which is contained in a report entitled Geology and Mineral Resources Study of Southern Ventura County, Preliminary Report 14, 1973, prepared by the Division of Mines and Geology in cooperation with the County Department of Public Works.

The evaluative system utilized in estimating the potential or past activity of individual faults and fault systems is discussed under "General Inventory of the Hazard." The basis and method of designation of the Fault Hazard Zones is similar to that used by the State Division of Mines and Geology in establishing the Special Study Zones along active and potentially active faults within the State.

Research and experience dealing with the nature and mechanism of faults and fault activity is being conducted by various Federal and State agencies as well as by universities and professional organizations. Much of this work is being conducted on a statewide basis, however, indirect benefit to Ventura County will be gained through developed technology. Additional investigation is being conducted on a continuing basis by:

- Private Geologic Consultants who provide original information during investigations for private developments.

- Ventura County Public Works Agency which:

  1. Provides review and evaluation of Geologic and Soils and Foundation Engineering reports prepared for private projects within the unincorporated area and for the Cities of Camarillo, Simi Valley and Santa Paula.

  2. Perform Geologic and Soils Engineering investigations for County projects such as roads and flood control facilities.

  3. Coordinates, evaluates, and compiles geologic information derived from public and private investigations within the unincorporated areas and for the Cities of Camarillo, Simi Valley and Santa Paula.

Presently, there is no way to prevent or accurately predict when an earthquake and surface displacement is apt to occur along a given fault. The state of the art is such that at best only the recency of past activity can be determined along some faults. In the southern California area, those faults which have general east-west trends or are associated with the northwesterly-trending San Andreas Fault are considered to be potentially the most active.

2.2.6 ALLEVIATION OF THE HAZARD

Alleviation of the hazard is largely accomplished through land use controls. The agencies, departments and legislative bodies making land use decisions have the primary responsibility for alleviating the hazard. Decisions concerning adoption of these recommendations rest ultimately with the Planning Commission and the Board of Supervisors. Other bodies making land use decisions include Port Districts and redevelopment agencies.

Alleviation of existing hazards can be effected by removal of structures located over, or strengthening structures in hazardous proximity to, active or potentially active faults. Determination of whether structures are hazardously located would require detailed investigation of geologic conditions and of the potential for activity along any faults found.

Present information is not considered sufficiently accurate to warrant special investigation for most existing development. Consideration should, however, be given to reconfirming the safety of critical facilities, including public structures and those where large numbers of people may gather, where such facilities are over or near known faults. Future, more detailed information on fault locations may indicate that further evaluation of some existing structures or facilities could be warranted.

Structures which could be considered for evaluation include hospitals, rest homes, churches, large commercial buildings, important industrial structures, schools, residential or commercial buildings over two stories in height and critical utility facilities.

2.2.7 CONCLUSION

Available geologic information indicates that the potential for the occurrence of surface displacement along one or more of the major east-west trending faults within the County and within the life of existing structures is high compared to the potential hazard Statewide. Major development along most of the east-west fault within the County should be carefully considered until such time as adequate information is available to conclude that such faults are not active or potentially active.

Although experience has shown that destruction of structures places over faults along which sudden surface displacement occurs is nearly total. historically only on one occasion has surface displacement significantly affected development (San Fernando Earthquake of 1971). Although this hazard is considered real within the County, the effect of the hazard is low compared to the likelihood of greater losses which could occur as a result of strong seismic shaking.

In the event of surface displacement along a fault transecting one of the urbanized or industrialized areas of the County, loss of life and property damage in the unincorporated and incorporated areas could be significant, depending upon where the displacement was located.

Much of the existing land development occurred many years ago, before the full potential danger of concealed or obscure faults was recognized and, therefore, little subsurface investigation of geologic conditions was conducted. In general, little is known of the recency of past movement along most of the faults within the County, or whether any related fault branches may be present. Several recent investigations for private development in the vicinity of some of the faults has indicated no fault disturbance of near-surface earth materials. Future such investigations could, however, reveal that some segments, branches, or extensions of faults within the zones are active.

Considerable research has been done since the information in this section was compiled, and parts of the section no longer reflect current knowledge, particularly with respect to precise fault locations and potential for activity. This section will, however, be updated as part of the next update of the Hazards Appendix. In the meantime, the policies of the Alquist-Priolo Special Studies Zones Act, in conjunction with available State and local fault information, are considered to provide adequate protection against fault rupture hazards.

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.2.1a

LOCALLY IDENTIFIED earthquake faults



SOURCE: PUBLIC WORKS AGENCY 1974

NOT TO SCALE



VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.2.1b

LOCALLY IDENTIFIED

earthquake faults

NOT TO SCALE

SOURCE: PUBLIC WORKS AGENCY 1974

Figure 2.2.2

RESOURCES AFFECTED BY FAULTS AND FAULT ZONES

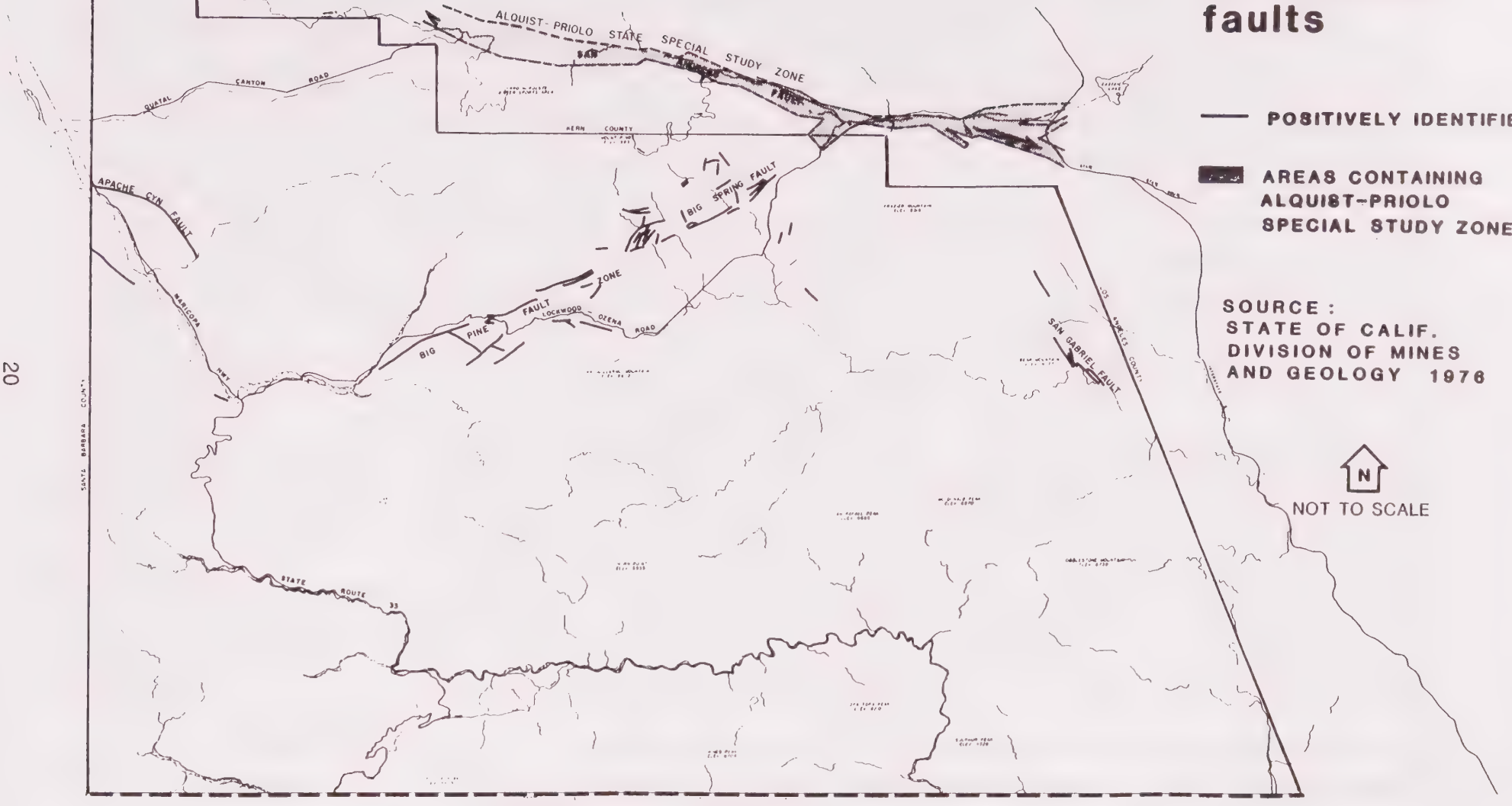
FAULT	SINGLE-FAMILY	SCHOOLS	FIRE STATIONS	SEWER	WATER	GAS	ELEC-TRICITY	MAJOR ROADS	OTHER
Arroyo Parida-Santa Ana Fault		(1)		●	●			●	
Red Mountain Fault	●		●	●	●	●	●	●	
Lion Mountain Fault	●	(2)	●	●	●	●	●	●	
San Cayetano-Del Valle Fault Zone	●	(3)	●	●	●	●	●	●	●
Fault E. of Moorpark	●			●	●	●	●		
Fault N. of Moorpark						●			
Sycamore Canyon Fault				●	●	●	●	●	
W. Side Fault of Sycamore Cyn.	●			●	●				
Eureka Cyn.-Santa Susana Fault						●	●		
Simi Fault	●			●	●	●	●		
Boney Mountain Fault						●			
Bailey Fault				●	●	●	●		
Fault nr. Camarillo State Hospital							●		(5)
Santa Rosa Fault				●	●	●	●		●
Springville Fault		(4)		●	●	●	●		●
Oak Ridge Fault			●	●		●	●		
Oak Ridge Extension				●	●				
Camarillo Fault				●			●		

(1) Villanova Prep. School
(2) Oak View and Arnaz Schools
(3) Summit and Piru Schools
(4) Camarillo Heights Elem. School
(5) Camarillo State Hospital

Note: This table deals only with resources in unincorporated territory.

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.2.3a

STATE IDENTIFIED earthquake faults



POSITIVELY IDENTIFIED

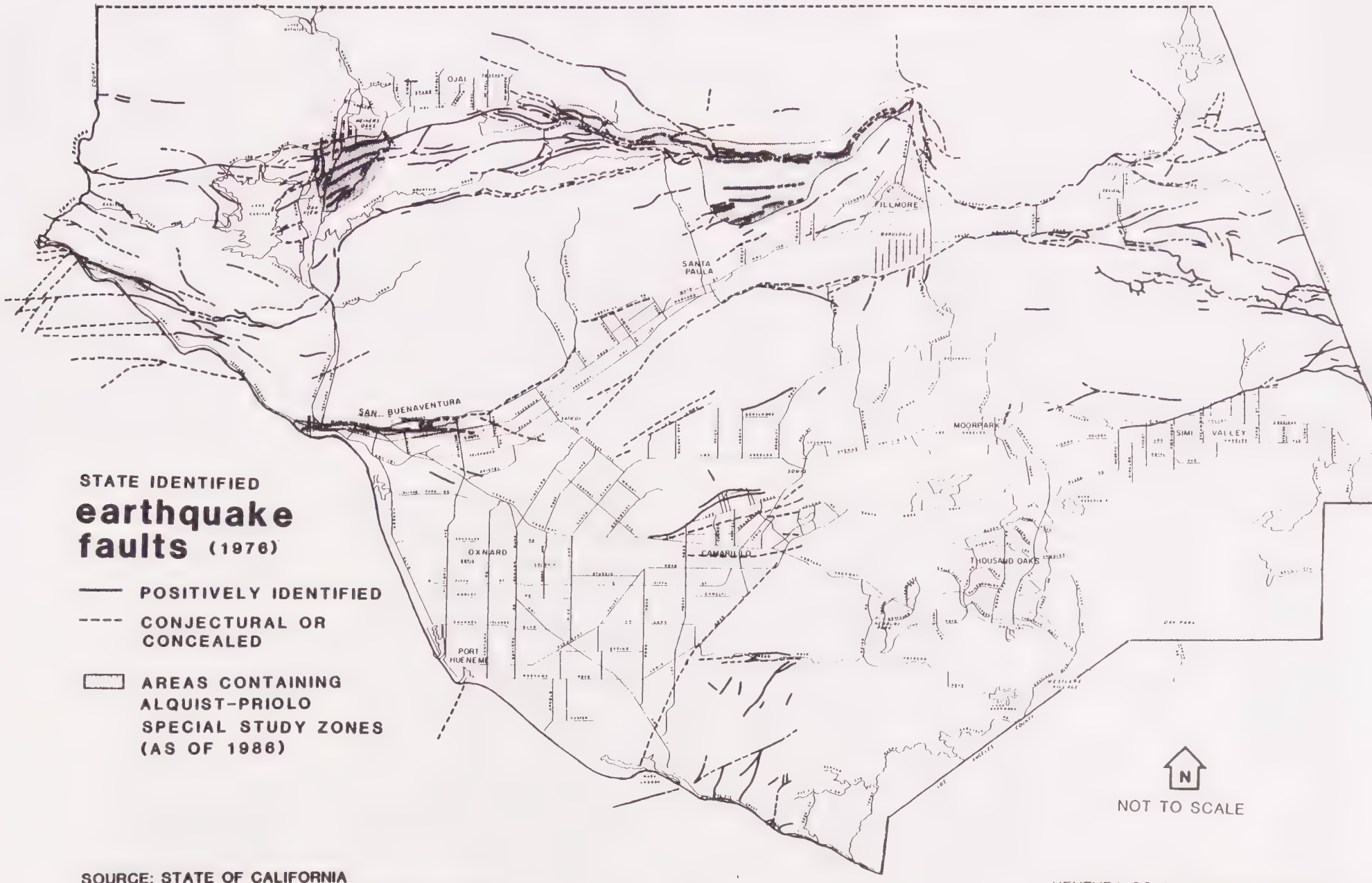
AREAS CONTAINING ALQUIST-PRIOLO SPECIAL STUDY ZONES

SOURCE:
STATE OF CALIF.
DIVISION OF MINES
AND GEOLOGY 1976

N

NOT TO SCALE

NORTH HALF MATCH LINE



SOURCE: STATE OF CALIFORNIA
DIVISION OF MINES AND GEOLOGY - 1976

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.2.3b

APPENDICES

Data are presented herein to provide city and county officials, property owners, developers, geologists, and others with specific information they may need to effectuate the Act. Because the Act must be implemented at the local government level, it is imperative that the local entities understand its various complex aspects.

Appendix A

ALQUIST-PRIOLO SPECIAL STUDIES ZONES ACT OF 1972

Excerpts from California Public Resources Code

DIVISION 1. ADMINISTRATION
CHAPTER 2. DEPARTMENT OF CONSERVATION
Article 3. State Mining and Geology Board
and the Division of Mines and Geology

660. There is in the department a State Mining and Geology Board consisting of nine members appointed by the Governor.

673. The board shall also serve as a policy and appeals board for the purposes of Chapter 7.5 (commencing with Section 2621) of Division 2.

DIVISION 2. GEOLOGY, MINES AND MINING
CHAPTER 7.5. SPECIAL STUDIES ZONES

, 2621. This chapter shall be known and may be cited as the Alquist-Priolo Special Studies Zones Act.

2621.5. It is the purpose of this chapter to provide for the adoption and administration of zoning laws, ordinances, rules, and regulations by cities and counties in implementation of the general plan that is in effect in any city or county. The Legislature declares that the provisions of this chapter are intended to provide policies and criteria to assist cities, counties, and state agencies in the exercise of their responsibility to prohibit the location of developments and structures for human occupancy across the trace of active faults as defined by this board.

This chapter is applicable to any project, as defined in Section 2621.6, upon issuance of the official special studies zones maps to affected local jurisdictions, but does not apply to any development or structure in existence prior to May 4, 1975. The implementation of this chapter shall be pursuant to policies and criteria established and adopted by the State Mining and Geology Board.

2621.6. (a) As used in this chapter, "project" means:

(1) Any subdivision of land which is subject to the Subdivision Map Act, Division 2 (commencing with Section 66410) of Title 7 of the Government Code, and which contemplates the eventual construction of structures for human occupancy.

(2) Structures for human occupancy, with the exception of:

(A) Single-family wood frame dwellings to be built on parcels of land for which geologic reports have been approved pursuant to the provisions of paragraph (1) of this subdivision.

(B) A single-family wood frame dwelling not exceeding two stories when such dwelling is not part of a development of four or more dwellings.

(b) For the purposes of this chapter, a mobilehome, whose body width exceeds eight feet shall be considered to be a single-family wood frame dwelling not exceeding two stories.

2621.7. This chapter, except Section 2621.9 shall not apply to the conversion of an existing apartment complex into a condominium. This chapter shall apply to projects which are located within a delineated special studies zone.

2621.8. This chapter shall not apply to alterations or additions to any structure within a special studies zone the value of which does not exceed 50 percent of the value of the structure .

2621.9 & 2622 (See 4/1/91 Ammendment Below)

2623. The approval of a project by a city or county shall be in accordance with policies and criteria established by the State Mining and Geology board and the findings of the State Geologist. In the development of such policies and criteria, the State Mining and Geology Board shall seek the comment and advice of affected cities, counties, and state agencies. Cities and counties shall require, prior to the approval of a project, a geologic report defining and delineating any hazard of surface fault rupture. If the city or county finds that no undue hazard of this kind exists, the geologic report on such hazard may be waived, with approval of the State Geologist.

After a report has been approved or a waiver granted, subsequent geologic reports shall not be required, provided that new geologic data warranting further investigations is not recorded.

2624. Nothing in this chapter is intended to prevent cities and counties from establishing policies and criteria which are stricter than those established by this chapter or by the State Mining and Geology Board, nor from imposing and collecting fees in addition to those required under this chapter.

2625. (a) Each applicant for approval of a project may be charged a reasonable fee by the city or county having jurisdiction over the project.

(b) Such fees shall be set in an amount sufficient to meet, but not to exceed, the costs to the city or county of administering and complying with the provisions of this chapter.

(c) The geologic report required by Section 2623 shall be in sufficient detail to meet the criteria and policies established by the State Mining and Geology Board for individual parcels of land.

2630. In carrying out the provisions of this chapter, the State Geologist and the board shall be advised by the Seismic Safety Commission.

SIGNED INTO LAW DECEMBER 22, 1972; AMENDED SEPTEMBER 26, 1974, MAY 4, 1975, SEPTEMBER 28, 1975, SEPTEMBER 22, 1976 AND SEPTEMBER 27, 1979

AMENDMENT TO THE ALQUIST-PRIOLO SPECIAL STUDIES ZONES ACT, SECTIONS 2621.9 AND 2622 OF THE PUBLIC RESOURCES CODE, EFFECTIVE APRIL 1, 1991

(From AB 3897, W. Brown, Chapter 1168, Statutes of 1990)

2621.9. (a) A person who is acting as an agent for a seller of real property which is located within a delineated special studies zone, or the seller if he is acting without an agent, shall disclose to any prospective purchaser the fact that the property is located within a delineated special studies zone, provided the maps prepared pursuant to this chapter, or the information contained in the maps, are reasonably available.

(b) For the purposes of this section, in all transactions subject to Section 1102 of the Civil Code, disclosure shall be provided by either of the following means:

(1) The real estate transfer disclosure statement set out in Section 1102.6 of the Civil Code.

(2) The local option real estate transfer disclosure statement set out in subdivision (a) of Section 1102.6 of the Civil Code.

(c) For the purposes of this section, "reasonably available" means that for any county that includes areas covered by a delineated special studies map, a notice has been posted at the offices of the county recorder, county assessor, and county planning commission that identifies the location of the map and the effective date of the notice, which shall not exceed 10 days beyond the date the county received the map from the State Geologist.

(d) For purposes of the disclosures required by this section, the following persons shall not be deemed agents of the transferor:

(1) Persons specified in Section 1102.11 of the Civil Code.

(2) Persons acting under a power of sale regulated by Section 2924 of the Civil Code.

(e) For purposes of this section, Section 1102.13 of the Civil Code shall apply.

2622. (a) In order to assist cities and counties in their planning, zoning, and building-regulation functions, the State Geologist shall delineate, by December 31, 1973, appropriately wide special studies zones to encompass all potentially and recently active traces of the San Andreas, Calaveras, Hayward, and San Jacinto Faults, and such other faults, or segments thereof, as he deems sufficiently active and well-defined as to constitute a potential hazard to structures from surface faulting or fault creep. Such special studies zones shall ordinarily be one-quarter mile or less in width, except in circumstances which may require the State Geologist to designate a wider zone.

(b) Pursuant to this section, the State Geologist shall compile maps delineating the special studies zones and shall submit such maps to all affected cities, counties, and state agencies, not later than December 31, 1973, for review and comment. Concerned jurisdictions and agencies shall submit all such comments to the State Mining and Geology Board for review and consideration within 90 days. Within 90 days of such review, the State Geologist shall provide copies of the official maps to concerned state agencies and to each city or county having jurisdiction over lands lying within any such zone.

(c) The State Geologist shall continually review new geologic and seismic data and shall revise the special studies zones or delineate additional special studies zones when warranted by new information. The State Geologist shall submit all revised maps and additional maps to all affected cities, counties, and state agencies for their review and comment. Concerned jurisdictions and agencies shall submit all such comments to the State Mining and Geology Board for review and consideration within 90 days. Within 90 days of such review, the State Geologist shall provide copies of the revised and additional official maps to concerned state agencies and to each city or county having jurisdiction over lands lying within any such zone.

(d) In order to ensure that sellers of real property and their agents are adequately informed, any county that receives an official map pursuant to this section shall post a notice within five days of receipt of the map at the offices of the county recorder, county assessor, and county planning commission, identifying the location of the map and the effective date of the notice.

R.12/10/91

Appendix B

POLICIES AND CRITERIA OF THE STATE MINING AND GEOLOGY BOARD

With Reference to the Alquist-Priolo Special Studies Zones Act

(Excerpts from the California Administrative Code, Title 14, Division 2, Chapter 8, Subchapter 1, Article 3)

3600. Purpose.

It is the purpose of this subchapter to set forth the policies and criteria of the State Mining and Geology Board, hereinafter referred to as the "Board," governing the exercise of city, county, and state agency responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults in accordance with the provisions of Public Resources Code Section 2621 et seq. (Alquist-Priolo Special Studies Zones Act). The policies and criteria set forth herein shall be limited to potential hazards resulting from surface faulting or fault creep within special studies zones delineated on maps officially issued by the State Geologist. NOTE: Authority cited: Section 2621.5, Public Resources Code. Reference: Sections 2621 - 2630, Public Resources Code.

3601. Definitions.

The following definitions as used within the Act and herein shall apply:

(a) An "active fault" is a fault that has had surface displacement within Holocene time (about the last 11,000 years), hence constituting a potential hazard to structures that might be located across it.

(b) A "fault trace" is that line formed by the intersection of a fault and the earth's surface, and is the representation of a fault as depicted on a map, including maps of special studies zones.

(c) A "lead agency" is the city or county with the authority to approve projects.

(d) "Special studies zones" are areas delineated by the State Geologist, pursuant to the Alquist-Priolo Special Studies Zones Act (Public Resources Code Section 2621 et seq.) and this subchapter, which encompass the traces of active faults.

(e) A "structure for human occupancy" is any structure used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year.

(f) "Story" is that portion of a building included between the upper surface of any floor and the upper surface of the floor next above, except that the topmost story shall be that portion of a building included between the upper surface of the topmost floor and the ceiling or roof above. For the purpose of the Act and this subchapter, the number of stories in a building is equal to the number of distinct floor levels, provided that any levels that differ from each other by less than two feet shall be considered as one distinct level.

3602. Review of Preliminary Maps.

(a) The Board shall provide an opportunity for receipt of public comments and recommendations during the ninety (90) day period provided by Public Resources Code Section 2622, which shall include at least one public meeting scheduled for that purpose.

(b) Following the end of the 90-day review period, the Board shall forward its comments and recommendations, with supporting data received, to the State Geologist for consideration prior to his officially issuing the maps. NOTE: Authority cited: Section 2621.5, Public Resources Code. Reference: Section 2622, Public Resources Code.

3603. Specific Criteria.

The following specific criteria shall apply within special studies zones and shall be used by affected lead agencies in complying with the provisions of the act:

(a) No structure for human occupancy, identified as a project under Section 2621.6 of the Act, shall be permitted to be placed across the trace of an active fault. Furthermore, as the area within fifty (50) feet of such active faults shall be presumed to be underlain by active branches of that fault unless proven otherwise by an appropriate geologic investigation and report prepared as specified in Section 3603(d) of this subchapter, no such structures shall be permitted in this area.

(b) Affected lead agencies, upon receipt of official special studies zones maps, shall provide for disclosure of delineated special studies zones to the public. Such disclosure may be by reference in general plans, specific plans, property maps, or other appropriate local maps.

(c) No change in use or character of occupancy, which results in the conversion of a building or structure from one not used for human occupancy to one that is so used, shall be permitted unless the building or structure complies with the provisions of the Act.

(d) Application for a development permit for any project within a delineated special studies zone shall be accompanied by a geologic report prepared by a geologist registered in the State of California, which is directed to the problem of potential surface fault displacement through the project site, unless such report is waived pursuant to Section 2623 of the Act. The required report shall be based on a geologic investigation designed to identify the location, recency, and nature of faulting that may have affected the project site in the past and may affect the project site in the future. The report may be combined with other geological or geotechnical reports.

(e) A geologist registered in the State of California, within or retained by each lead agency, shall evaluate the geologic reports required herein and advise the lead agency.

(f) One (1) copy of all such geologic reports shall be filed with the State Geologist by the lead agency within thirty (30) days following the report's acceptance. The State Geologist shall place such reports on open file.

NOTE: Authority cited: Section 2621.5, Public Resources Code. Reference: Sections 2621.5, 2622, 2623, and 2625(c), Public Resources Code.

ADOPTED NOVEMBER 23, 1973; REVISED JULY 1, 1974, AND JUNE 26, 1975.
CODIFIED IN CALIFORNIA ADMINISTRATIVE CODE JANUARY 31, 1979;
REVISED OCTOBER 18, 1984 (EFFECTIVE 30 DAYS THEREAFTER).

R.12/10/91

2.3 GROUND SHAKING

2.3.1 GENERAL

"Ground shaking" is the physical movement of the land surface due to earthquakes. When a fault breaks, the accumulated strain energy is released as seismic waves that travel outward in all directions from the earthquake focus (the point of first release of tectonic stress located below the earth's surface on the fault plane, causing ground shaking). Seismograms (records of earthquake motion) indicate that several kinds of motions, or waves, are created by earthquakes. These waves exhibit different types and directions of movement. Each type of wave can affect buildings slightly differently depending on many diverse variables. The combined effect of these waves makes up the round shaking component of an earthquake.

Two separate indexes, or scales, are commonly used in the United States in describing seismic or earthquake disturbances. The qualitative rating of the degree of earthquake shaking based upon feeling and visual observation is indicated by an intensity scale. The size or energy release of earthquakes is measured by a magnitude scale.

Measurement of the radiated energy released by an earthquake was originally proposed by C. F. Richter in 1932. This method assigns a number to the calculated energy release (magnitude), and can rank earthquakes and compare them to one another. By this method, an earthquake is rated independently of the place of observation. The Richter Scale is logarithmic, and is not limited, either at top or bottom. Each magnitude step on the scale represents an increase of ten times in measured wave amplitude of the earthquake, and 30 times the amount of energy released as seismic waves. A magnitude 2 is about the smallest earthquake that can be felt by human beings. The index used to measure earthquake intensity (as opposed to magnitude) in this country is the modified Mercalli Intensity Scale, with intensity scales ranging from I for earthquakes barely perceptible by human beings to XII for "the ultimate catastrophe." The scale is a description of the physical effects of earthquakes. There is only a rough correlation between the magnitude of an earthquake and the intensity.

The intensity of ground shaking during an earthquake depends in large part on geologic foundation conditions (i.e., the thickness and physical properties of the materials comprising the upper several hundred feet beneath the area). In general, the greatest amplitudes and longest durations of ground shaking usually occur on thick, water-saturated, unconsolidated alluvial sediments.

Examination of damage from numerous past earthquakes has suggested that the greatest damage to tall structures results where they are built over thick, relatively soft, water-saturated sediments and that the least damage occurs where they are built on very firm bedrock. Conversely, one or two-story buildings may be in trouble on firmer ground. Further complicating this very generalized picture are a wide variety of other

factors that may contribute significantly to a damage potential: magnitude of a particular earthquake, distance and direction from the epicenter and causative fault, duration of shaking, the structural integrity of buildings before the earthquake, and many others.

2.3.2 LOCATION OF THE HAZARD

The ground shaking hazard exists throughout Ventura County and may significantly increase wherever there is ground material that could significantly amplify the ground waves of an earthquake and produce high intensity ground shaking; the area affected would generally be determined by the magnitude of the earthquake. Those areas that might be shaken more than others are in the hazard zones (shown on Figures 2.3a and 2.3b).

The highest amplification of ground shaking occurs in areas with the greatest potential for long period wave shaking, designated as Area A on the maps. Basically, this is the Oxnard Plain and the Santa Clara River in the south half of the County. and Lockwood, Cuyama, and Cuddy Valleys in the north half.

The areas with the greatest amplification of short period shaking are along the base of the hills, in minor river valleys and in the broken bedrock along fault lines such as the San Cayetano and Simi-Santa Rosa Faults. Slight to moderate amplification of short period oscillations may occur on terrace deposits or soft bedrock, which has a thin soil covering. These materials are found in young hill areas such as South Mountain, Oak Ridge, Sulphur Mountain, and the north coastal hill lands and the Piru area in the south half of the County. In the north half of the County, these are along the margins of the valley areas such as Hungry and Lockwood Valleys and hill lands north of Cuyama.

In addition to the forces causing horizontal movement, such as that predominant along the San Andreas Fault, Ventura County and portions of adjacent areas are subject to compressional forces acting in north-south directions. These latter forces tend to compress or try to shorten the distance from San Andreas Fault south to the coast. The San Fernando Earthquake of 1971, resulting in the thrusting of the southern margin of the San Gabriel Mountains several feet southward over the north margin of the San Fernando Valley, was caused by these compressional forces. Several faults in Ventura County have been formed by and are related to these same forces. These fault systems are described in the Fault Rupture section.

2.3.3 SOUTHERN VENTURA COUNTY

The south half of the County is considered that portion southerly of the east-west projection of Nordoff Ridge located immediately north of the Ojai Valley. Even though the historic record indicates that no strong earthquakes or surface displacement have occurred along the faults within the south half, the likelihood of the occurrence of one or more of such events within 50 to 100 years is not remote. The San Fernando Earthquake of 1971 occurred along a fault having little historic record of activity. Several of the faults within the south half of the County, such as Santa

Susana and San Cayetano, are subject to similar tectonic forces as those that caused the San Fernando Earthquake. Crustal deformation resulting in similar earthquakes will likely continue into the indefinite future. It is probable that earthquakes of magnitude 6 or larger will occur in the south half of the County area or in the nearby offshore areas, and it would be consistent with past experience if several such shocks occurred in the next century.

According to the "Geology and Mineral Resources Study of Southern Ventura County" (1972) prepared by the State Division of Mines and Geology in cooperation with the Ventura County Department of Public Works, the earthquake history of the south half of the County is dominated by small to moderate shocks. No earthquake greater than magnitude 4.7 has been recorded in Ventura County, or the immediate offshore area, since 1934, when adequate instrumental records became available. These relatively minor shocks have caused local damage but no recorded loss of life. A review of the earlier less accurate record from 1769 to 1934 suggests a similar history for the south half, although there were significant earthquakes in 1812, 1857, 1925 and 1971 that caused structural damage in specific areas of the south half of the County. The historic record shows that the north half has experienced several severe shocks originating along faults both within and immediately outside of the area. The geologic record shows that a high level of tectonic activity has continued to the present time.

2.3.4 NORTHERN VENTURA COUNTY

The most important faults in the vicinity of the northern County area are the Big Pine, San Gabriel and Frazier Mountain Thrust, all of which converge at the northeast corner of Ventura County. All of these faults except perhaps the Frazier Mountain Thrust are considered to be active, i.e., are potential focal points for the occurrence of earthquakes and displacement of the ground surface. Other mapped and unknown faults within the north half may also prove to be active by future displacement or detailed investigations. The earthquakes (apparently several) of November 1852 were accompanied by about 30 miles of surface faulting in Lockwood Valley. The exact location of the surface breaks is unknown, but geologic evidence and reports by others indicate that it may have been along the Big Pine Fault, a major left-lateral fault with some oblique slip (subject to both horizontal and vertical displacement).

Several other faults found in the Lockwood Valley area have had recent movement by virtue of their cutting of terrace deposits and offset of other faults. These faults range from several hundred to a few thousand feet in length. Some of them indicate the region has recently undergone, and is probably still undergoing, compression along north-south directions.

Geologic and survey evidence indicate that stress is building up along the San Andreas Fault to the north. It is just a question of time until the fault in this area again displaces; the resulting earthquake will probably be severe. Prediction of when displacement will occur is not possible at this time; however, it is likely that it will occur within 100 years and possibly much sooner.

Earthquakes and surface displacement originating along faults within the north half is highly possible, but again, prediction of when this will happen is not possible. Determination of the potentially most active faults would require extensive field investigation. The apparently active compressional forces which continue to affect the area provide the means through which future earthquakes could occur along faults within the area.

2.3.5 DEFINITION OF HAZARD ZONES

The boundaries of the "ground shaking hazard zones" as indicated on Figures 2.3a and 2.3b (Southern Ventura County and Northern Ventura County) are based on the concept that ground shaking is partly determined by the thickness of the alluvium or unconsolidated material overlying relatively firm bedrock or consolidated earth material, and the depth to the groundwater table. The zones identified are as follows:

Zone A. The "A" hazard zones are those that have a high water table level (15 feet or less below the ground surface) and deep alluvium (more than about 50 to 100 feet in thickness). They may be subject to the greatest amplification of long period vibrations. The areas affected include: Pleasant Valley and the lowest part of the Santa Clara River Valley in the south half of the County. Also included in the "A" hazard zone are the sides of Lockwood Valley and Cuddy Valley and the entire Cuyama Valley floor in the north half of the County.

Zone B. This zone encompasses areas with deep alluvium but with groundwater levels more than 15 feet below the ground surface. These areas could experience moderate amplification of long period ground vibration. These areas include basically the margins of the "A" zone in the Santa Clara Valley, the flood plains of Calleguas Creek and Arroyo Santa Rosa, the southern edge of the Las Posas Valley, Simi Valley and the Ojai Valley.

Zone B-C. (No. County only) These are areas underlain by alluvium less than about 50 feet in thickness and with groundwater levels more than about 15 feet below ground surfaces. These areas could experience the greatest amplification of short period ground vibration.

Zone C. So. County only) These are areas underlain by broken bedrock adjacent to faults or where ground alluvium is less than about 50 feet in thickness. These areas could experience the greatest amplification of short period ground vibration, and include most of the valley margins surrounding the long period amplification. The zone also follows some fault lines in the broken bedrock, such as the San Cayetano Fault between Fillmore and Ojai and between the Simi and Santa Rosa Valleys. It also includes most of the valley bottoms in the north half of the County.

Zone D. The areas designated as slight to moderate short period amplification (Zone D) are composed mainly of younger sedimentary bedrock and terrace deposits. They include the

relatively new hill area south of the San Cayetano and Oak Ridge Faults in the south half, and the high margins of the valley areas in the north half. These areas may not experience as severe shaking as the other zones, but more than Zone E because of softer materials and relatively thin soil cover.

Zone E. This zone encompasses areas underlain by hard bedrock with little or no soil cover. These areas may not experience as severe shaking as the other zones because the geological and/or groundwater conditions will not allow amplification of shaking.

2.3.6 CONCLUSION

High-rise buildings are more susceptible to damage in Ground Shaking Hazard Zones A and B, while low-rise buildings are more susceptible Zones B-C, C and D. It should be noted, however, that the hazard zone locations, boundaries and estimated ground response are not sufficiently accurate on which to base building code requirements or design criteria for individual site development, or even provide a basis for land use planning, except in the broadest sense, without more detailed investigation. The information is only illustrative of the wide range of ground shaking that can be anticipated over relatively short distances based upon the type and depth of earth materials and the presence of groundwater. The history of severe earthquakes provides an indication of what will probably occur in the future; however, the record does not provide a statistically sound basis for prediction.

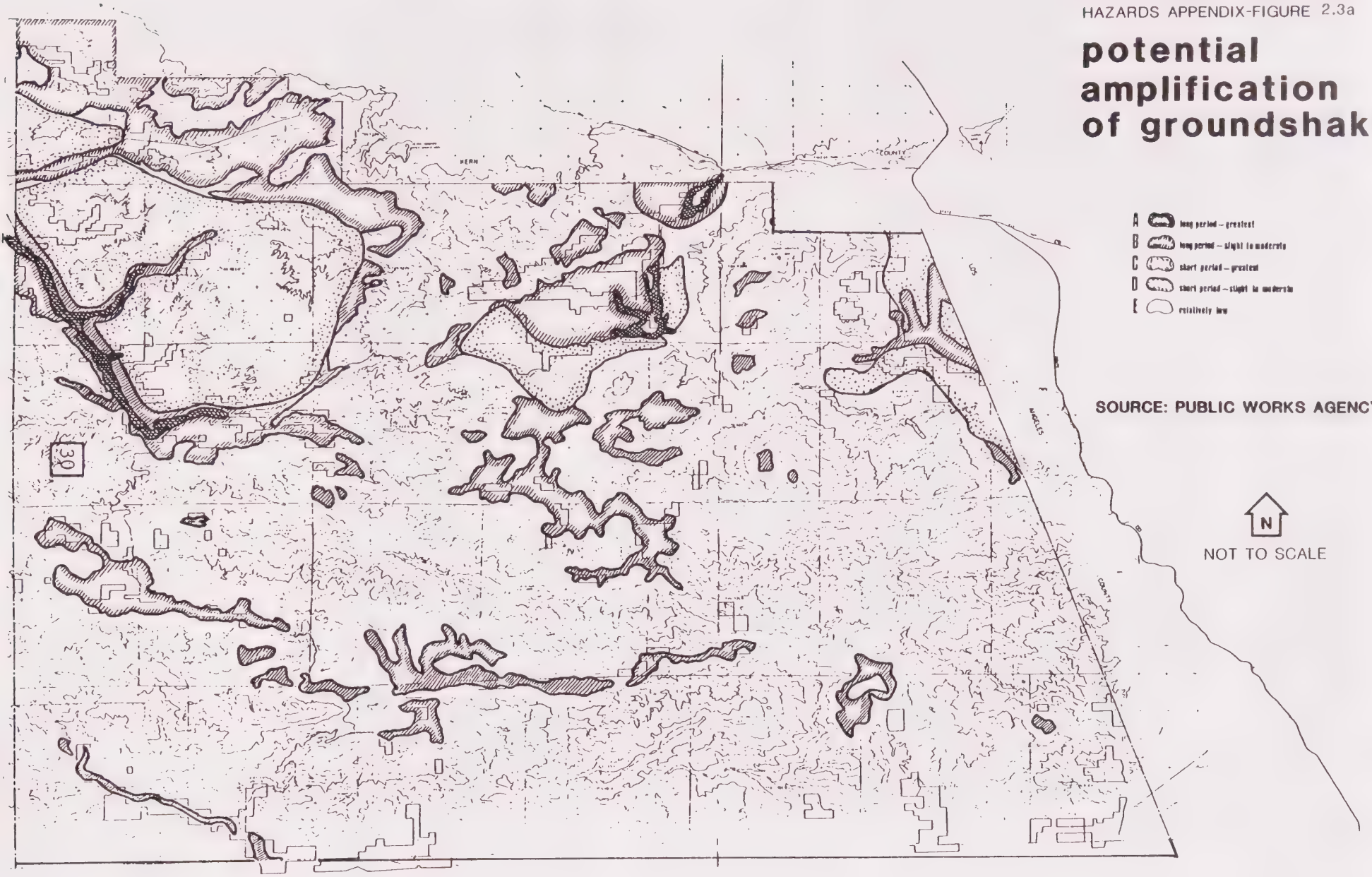
Individual site investigation to provide detailed estimates of ground shaking sufficient for design purposes would include determination and analysis of the following information;

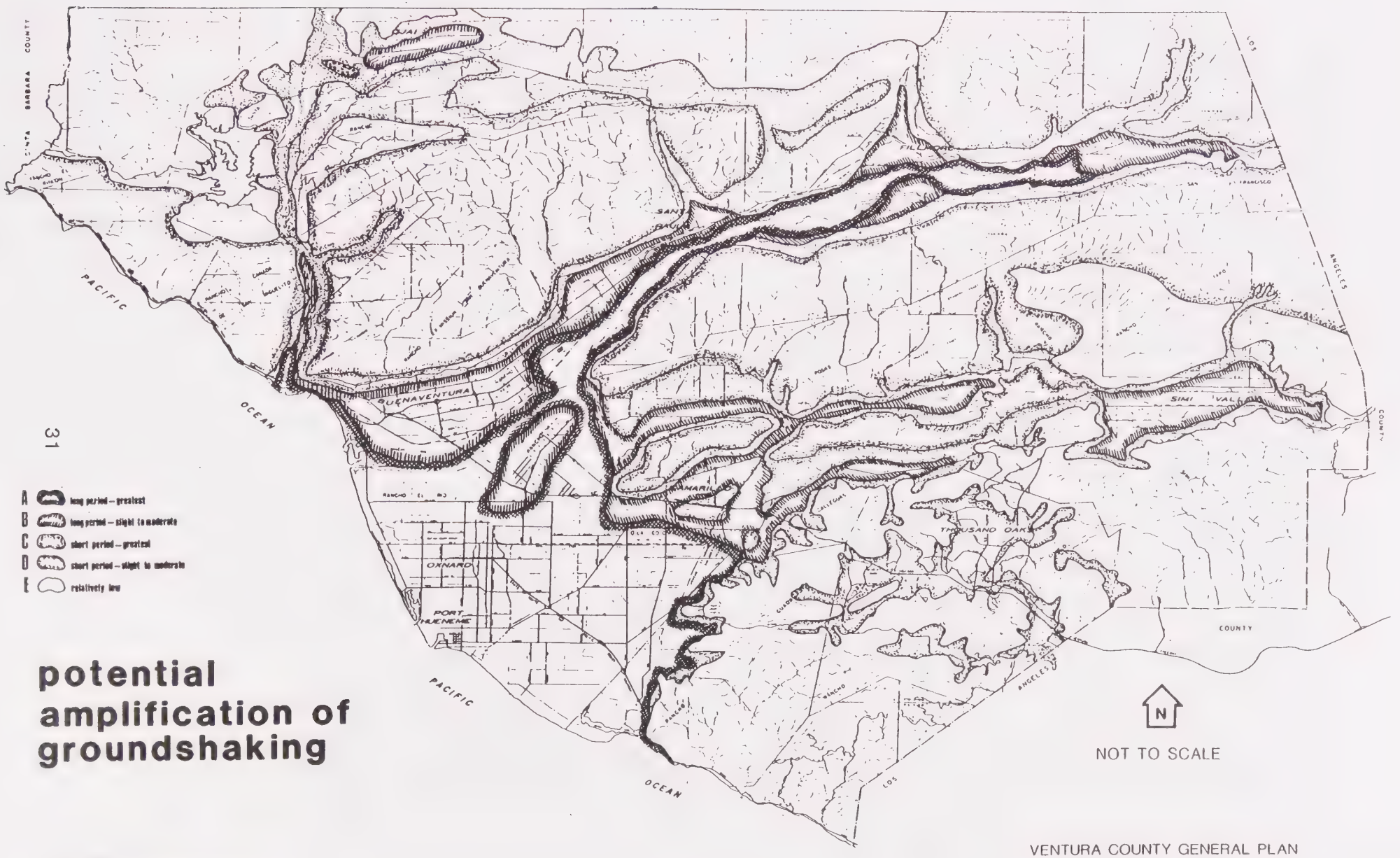
1. Depth and character of earth materials.
2. Presence and depth to groundwater.
3. Depth to and character of bedrock.
4. Evaluation of past earthquake records.
5. Estimate of the most likely earthquake to occur within the life of the proposed structure, based upon existing earthquake records and evaluation of the potential activity of nearby as well as distant faults.
6. Evaluation of applicability of ground response records from other earthquakes and modification of them as necessary to suit the site in question, or determination of ground response by computer methods.

There is currently no way to prevent or predict to any degree of accuracy earthquakes, their severity, or kind of ground shaking during earthquakes. Alleviation of existing hazards can be effected by replacement or strengthening of structures which may not be designed to resist strong ground shaking, or modification of land uses as hazardous structures are removed. Determination of whether structures are hazardous would require detailed geologic-seismic and soils engineering investigation of the site and structural engineering evaluation of the particular structure.

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.3a

potential amplification of groundshaking





potential amplification of groundshaking

NOT TO SCALE

SOURCE:
PUBLIC WORKS AGENCY
OCT. 1974

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.3b

2.4 TSUNAMI

2.4.1 LOCAL HISTORY

The worst recorded tsunami to hit California was in 1812. An earthquake occurred in the Santa Barbara Channel, and the resulting waves are reported by some disputed sources to have been up to 50 feet above sea level at Gaviota (Richter, Pg 113). The waves were probably at least 15 feet above sea level at Ventura.

In Crescent City, widespread damage and some loss of life occurred in 1964 as a result of a tsunami caused by the Alaska Earthquake. The tsunami from that earthquake also caused approximately $35,000 damage to the marinas in this County. This damage in Ventura County, which was mainly to the channel banks, was caused by the rapid and extreme changes in sea level.

The historic record indicates that there is a small probability of occurrence of a major tsunami in Ventura County. Statistically it has been over 170 years since the last major tsunami, but many smaller, unrecorded tsunamis may have occurred.

2.4.2 LOCATION OF THE HAZARD

All of the coastal areas in Ventura County are susceptible to tsunamis. A tsunami from the north Pacific could move down the Santa Barbara Channel and affect the northerly coastal areas; one from the South Pacific or from South America could strike the County coastal areas from the south to southwest; and a tsunami generated along one of the faults within the Santa Barbara Channel could affect much of the County coastal areas. The Channel Islands do not provide adequate protection for the County coastal area.

Tsunamis can also proceed up rivers for many miles if the gradient of the river is shallow. The effects of the waves are most noticeable on man-made features, but the waves can also change river channels and modify coastal landforms and these effects are noticeable for many years. The watercourses for the Ventura and Santa Clara Rivers and Calleguas Creek could be altered by a tsunami, and their biosystems temporarily damaged. There are likely to be similar effects on Mugu Lagoon.

The uncertainty of local effects makes the definition of the hazard zone difficult, but the east-west trending faults in the Santa Barbara Channel area seem to intensify the hazard parallel to them, thus increasing the possibility of high waves in the north and south coast areas. The hazard zone defined by this study, therefore, includes all areas of the County up to 20 feet above sea level and within one mile of the mean high tide line. Areas of exception are: east of Point Mugu and north of the Ventura River where the zone includes all areas up to 30 feet above sea level and up to 50 feet above sea level, respectively. Most of the land between the beach and the cliffs on both the North and South coasts is included within the hazard zone. The hazard zone from the Santa Clara River to Point Mugu extends inland approximately one mile.

The basis for the location of the hazard zone on the Oxnard Plain is the estimated 15-foot high wave of 1812. To provide an added safety margin, however, the hazard zone in this region is extended up to 20 feet in elevation. This estimated level will allow for the probably subsidence of the plains area as well as a possible rise in sea level since 1812. It is possible that waves larger than those ever recorded could occur, but there is no way to predict what level they would reach.

The recommended areas of evacuation in the event of a tsunami are all areas below the aforementioned elevations or within a mile of shore (whichever is of the greatest inland extent), and two miles inland on the Santa Clara River, Ventura River, and Calleguas Creek. The reason for extension of the zone two miles upstream from the mouths of these watercourses is that a tsunami can generate a wall of water called a "bore", and the breaking water front can cause great damage.

There are a number of small communities within the County whose residents could be affected by a major tsunami. These include, on the north coast (west to east), Rincon, Del Mar (Bates Point), La Conchita (Punta), Mussel Shoals (Punta Gorda), Seacliff, Faria and Solimar (Deulah). The areas of Hollywood-by-the-Sea and Silver Strand, as well as scattered multiple dwelling on the south coast, could suffer damage. During the summer months, many people camp at several parks within the hazard zone. These include: Hobson, Faria, Emma Wood, and Point Mugu State Park.

The Ventura Police Department on Ventura Avenue and the Fire Station on Santa Clara Street are also in the hazard zone, as are Pierpont school and both sewage treatment plants. In a major tsunami, the Holiday Inn, parking structure and Fairgrounds could be damaged. The San Buenaventura State Park could be disrupted and be flooded in places, and the railroad and both highway bridges could be damaged.

2.4.3 ALLEVIATION OF THE HAZARD

The threat to human life can be nearly eliminated by an effective warning system when advance notice is available. The County territory as well as the Cities of Oxnard and Port Hueneme have an efficient warning system in effect which can alert the entire affected population, if enough warning time is available.

The Seismic Sea Wave Warning System (SSWWS), directed by the Coast and Geodetic Survey, is the primary source of tsunami detection. This system has been in operation since 1948. The SSWWS and cooperating foreign countries operate a system of seismographs and tide stations. This system includes automatic seismic alarms that are triggered whenever an earthquake of sufficient magnitude to generate a tsunami is recorded. The SSWWS Honolulu Observatory determines the location of the quake by using the local arrival time of different earthquake waves. If the quake is in or near the Pacific Basin, a Sea Wave Advisory is issued, along with estimated times of arrival of tsunamis.

The SSWWS and the Alaskan Regional Tsunami System issue both Seismic Sea Wave Advisories, when an earthquake of significant magnitude has occurred in an area susceptible to tsunami generation, and Seismic Sea Wave Warnings, when tide stations confirm the generation of a tsunami.

These advisories and warnings are transmitted by National Oceanic and Atmospheric Administration satellite to the California Office of Emergency Service (OES). These warnings are evaluated by the Warning Control Officer and Director of OES, and if necessary a statewide warning is issued to the local sheriffs, along with the estimated time of arrival of the wave. Ultimately, the Sheriff has the responsibility to decide whether to alert the coastal areas. If it is decided that an evacuation is necessary, the Sheriff will call the Police Departments of Oxnard, Ventura and Port Hueneme; the Highway Patrol; Fire Department; and the Director of Disaster Services. After this is accomplished, appropriate jurisdictions and departments are alerted. It is the responsibility of each jurisdiction to decide whether or not their population will be alerted. The alerting agencies can only warn people of the hazard, they cannot force evacuation. However, they can control re-entry into a hazard area.

Unfortunately, neither the Seismic Sea Wave Warning System nor any other known means of monitoring can provide sufficient warning time to all for evacuation of coastal areas should a tsunami be generated along one of the faults within the Santa Barbara Channel. The arrival time for such a wave at any point on the coast would only be a matter of minutes. The only warning prior to arrival of a possible tsunami would be the ground shaking experienced from the earthquake. Such shaking would be felt in advance of the tsunami's arrival and, if heeded, could serve to alert people to move to higher ground.

2.4.4 ONGOING RESEARCH

Research on tsunami hazards is continuing on virtually all levels of government. UNESCO's International Oceanographic Commission has established an International Tsunami Information Center in Honolulu, to promote further research and exchange of information concerning tsunamis. The National Ocean Survey (NOS) and U.S. Coast and Geodetic Survey of the National Oceanic and Atmospheric Administration are the primary investigators of tsunamis in the U.S. The U.S. Geologic Survey is also assisting in the basic research of processes involved in the generation of tsunamis. The California Division of Mines and Geology is investigating the extent of hazard to California.

2.4.5 CONCLUSION

Because of the small possibility of a major tsunami occurring in Ventura County it is not reasonable to prohibit all development near beaches, nor is it practical to recommend drastic measures to protect existing coastline development. In addition, the warning systems and evacuation plans that are in place are considered to provide adequate protection in the event of a major tsunami being generated beyond the Santa Barbarba Channel.

2.5 SEICHE

2.5.1 NATURE OF THE HAZARD

The shaking of an earthquake can set up large and destructive oscillations that can send waves tens of feet above normal lake level. In harbors and bays, these waves can destroy harbor and shore facilities. Indirectly, tsunamis, by causing a rapid change in sea level or more commonly by the wave itself, can set up smaller internal oscillations in bays and harbors. These seiches are very similar to tsunamis, but the waves are smaller and of lower energy. Fault displacement under a reservoir can either displace a quantity of water or tilt the lake bed suddenly, producing waves by either effect. Earthquakes can also trigger landslides and these, whether triggered seismically or in some other manner can be by fair the most destructive type of seiche (see Landslide/Mudslide Hazard). A landslide into an enclosed body of water can produce massive waves, especially on the shore opposite the slide.

The extent of most seiches is small, usually no more than ten to twenty feet above water level, and the duration is short, usually only a few minutes. However, a landslide can displace a wave that could travel hundreds of feet up the opposite shore of a body of water. Also, tsunami-caused seiches can last for many hours due to the possible rejuvenation of the seiche by each passing tsunami crest; however, each seiche would last only a few minutes and be of decreasing severity.

2.5.2 HISTORY OF THE HAZARD

There is no record of a seiche occurring in Ventura County. Nevertheless, the worldwide history of the phenomenon illustrates the damage that seiches can do, and that seismic disturbances at great distances from this County could have an effect here. The Lisbon Earthquake of 1755 caused seiches in canals and lakes as far away as Holland, Switzerland, Sweden and Scotland, while on the Firth of Forth in Scotland, the water rose quickly eight inches or more soon after the time of the earthquake, and boats rocked at their moorings for three or four minutes (Bolt et al., Geologic Hazards, 1977).

In Italy, in 1963, a landslide into Vaiont Reservoir caused a seiche that traveled up 800 feet on the opposite bank of the lake and swept over both abutments of the dam (the world's highest thin-arch concrete dam) to a height of 328 feet. The water completely destroyed the town of Longarone below the dam, killing almost 3,000 people.

The 1964 Alaskan Earthquake led to the agitation of wells as far away as the coast of the Gulf of Mexico. Seiche surges along the Louisiana and Texas coasts commenced between 30 and 40 minutes after the earthquake origin, or about the time the surface waves were passing through the area. Minor damage was widespread, with parting of a barge moorings in the Mississippi River (Bolt et al., op. cit).

2.5.3 CONCLUSION

It appears that the actual threat that is posed by seiches in Ventura County is small, in that it is probably the most remote of the hazards studied, although it may not be the least severe.

There is no way to alleviate the effects of possible seiches except by prohibiting construction within the hazard area. Due to the indefinite nature of the triggering mechanisms, it seems doubtful that enough information will ever be known for general prediction of the hazard for planning purposes.

2.6 LIQUEFACTION

2.6.1 GENERAL

"Liquefaction" is a process by which loose, water-saturated granular materials behave for a short time as a dense fluid rather than as a solid mass. Liquefaction can occur at any level in the ground, but usually occurs within the first 40-50 feet. Depending upon specific soil conditions, such as density, uniformity of grain size, confining pressure and saturation of the soil materials with water, a certain intensity of groundshaking is required to trigger liquefaction. Intensity depends on the magnitude of the earthquake and the degree of the groundshaking. The duration of the shaking is also important, as it takes a certain number of cycles of ground shaking for liquefaction to occur.

Coarse-grained sands and gravels are not generally subject to liquefaction during earthquakes. Instead, the phenomenon is confined to medium- to fine-grained sands in a fairly loose to medium-dense condition. If the material is finer-grained than fine sand or coarse silt, it usually possesses some cohesion. This inhibits liquefaction, since the bonding of the grains to one another prevents the loss of contact between them. Therefore, most silty clays and clays do not liquefy.

Fine-grained soils in a saturated state are so widespread in their distribution, and earthquake vibrations extend over such large areas, that liquefaction phenomena have been a part of virtually every earthquake that has been closely studied. In some earthquakes it has been a major factor in the damage and destruction caused. Liquefaction phenomena played a part in massive soil movements in Alaska in 1964; in Niigata, Japan, also in 1964, they caused major disruption of services and utilities as well as giving rise to substantial building settlements and displacements. In the San Fernando Earthquake of 1971, liquefaction of material in the San Fernando Dam caused a landslide of the upstream portion of the dam structure. Slumping and displacement of other slopes and embankments in this earthquake have also been attributed to liquefaction (Bolt et al., Geological Hazards, 1977).

2.6.2 GENERAL EFFECTS OF THE HAZARD

There are two major kinds of liquefaction. The first is where surface of near-surface liquefaction of soils occurs. Structures whose foundations are within such a liquefaction zone lose support under part or all of their foundations, which causes them to tilt or settle into the ground surface. If a building is not designed to take this amount of stress, the entire building may collapse. A partially liquefied layer can also flow out from under the weight of the foundation with similar settling effects. As a general rule, for structures not designed against liquefaction, the larger the structure the greater its potential for settling through liquefaction during an earthquake. Thus, while differential settling may affect almost any structure, smaller buildings such as single-family frame homes are not likely to suffer major damage except in situations where the water table is less than fifteen feet from the surface. Larger buildings not designed against liquefaction, however, can be severely affected at

almost any level down to about forty to fifty feet below the surface, as loss of frictional support of deep pile foundations can occur. In addition, subsurface objects such as pipelines and storage tanks can float to the surface during the ground shaking, causing further damage and potentially widespread dislocation of services.

The second type of liquefaction occurs when the soil layer that liquefies is below the surface. As the soil compacts under the ground shaking of the earthquake, the hydrostatic pressure increases. This pressure is usually relieved by the flow of water and soil to the ground surface. If the subsurface liquefaction occurs on a slope, the liquefied layer can act as a lubricated plane for the layer above it to respond to gravity and move downhill. The effect is even more pronounced if the water cannot escape vertically and is forced horizontally along a contact surface. This type of liquefaction is a common cause of earthquake-induced landslides. Structures built across the edges of the slide are torn apart in much the same manner as if they were located on a fault; a good example of this occurred in the 1971 San Fernando Earthquake, where an area of almost 163 acres moved down a 2.5% slope. Movement down a slope with such a low gradient had not previously been recorded, but such effects must be considered in future earthquakes.

Liquefaction occurred in Calleguas Creek, Mugu Lagoon and the lower Santa Clara River during the February 21, 1973, Point Mugu Earthquake. The effects were mainly the development of minor ephemeral features such as shallow cracks and sand boils, but as Morton and Campbell point out in their report (see Bibliography), if the shaking had been more severe, such effects might well have been widespread and could have resulted in significant agricultural crop losses. The effects on structures could also have been significant. Eyewitness reports of the effects of the 1857 Fort Tejon Earthquake (magnitude ± 8.0) on the San Andreas Fault suggest general liquefaction occurred along the Santa Clara River, along with other damage.

Liquefaction often causes settlement of the soil. In Niigata, Japan, after the 1964 earthquake, settlement of over 3 feet was common. In Alaska, the ground around one wellhead settled 4.5 feet; there were also numerous bridge foundation settlings. Liquefaction can also destroy or disrupt much of the infrastructure (i.e., gas lines, water, sewer, roads, etc.) in an area. Pipelines could be broken either by being floated to the surface or by landslide displacement. Bridge abutments could suffer differential settlement, cutting off roads. The settlement of large areas of land could drop some areas below sea level and produce a new shoreline, or at least require reconstruction to re-establish continuity of roads, etc. (see Subsidence Hazard).

2.6.3 GENERAL INVENTORY OF THE HAZARD

A liquefaction threat may exist in the entire hazard zone identified on Figure 2.6. Liquefaction has occurred in this area and can be expected to occur again whenever an earthquake of sufficient intensity occurs. Areas which are designated as within the high hazard zone are alluvial areas which have had water table levels within 15 feet of the ground surface at some time in the last fifty years or since well records have been kept.

The moderate hazard is defined as including alluvial areas which have had water between 15 and 40 feet of the surface.

Large areas of the County have a surface layer of unconsolidated sand deeper than 40 feet. Therefore, the primary variable factor for liquefaction in the County is the depth of the water table. To encompass a worst-case situation, the highest water level was used as the basis for these assumptions. This is reasonable in urbanized areas where the water table is usually rising due to a number of factors, including curtailment of pumping, importation of increased amounts of water, reduced evaporation due to paving, heavy irrigation from watering of yards, percolation of sewage, etc. The threat posed by this hazard also varies depending upon the seasonal water level in some areas. The hazard zones designated assume that water levels are at their highest.

The significance of the water level being less than 15 feet from the surface is that in this range even small structures such as single-family residences could be affected by liquefaction. This is the level at which the most severe liquefaction damage occurred in the 1964 Niigata Earthquake. The 40-foot level corresponds to approximately the deepest level at which liquefaction most commonly can occur and is the level above which most building foundations are constructed.

In terms of loss of lives or injury occurring from liquefaction hazards, a threat exists in the Oxnard Plain, Pleasant Valley, the Ventura Rive flood plain and in Newbury Park. In addition, those communities located in the Ventura River flood plain having concentrations of people, especially in single-family homes, may be affected. A number of schools could be affected by liquefaction, although they are in the moderate hazard zone, including DeAnza Junior High and all of the schools of Rio School District, and Rio Mesa High School. The Briggs Road Industrial Park is located in the high hazard zone, as are the nearby industries in the County areas of Saticoy. Other areas that could be affected include: (1) Ormond Beach Generating Plant and most of the high voltage transmission lines on the Oxnard Plain and crossing the Santa Clara and Ventura Rivers; (2) most of the oil facilities along Ventura Avenue, and (3) the entire Point Mugu Naval Air Station. There are also numerous pipelines and other underground utilities that could be affected on the Oxnard Plain and near the rivers.

Simi Valley appears to have a high liquefaction potential in both the east and west basins. Most of the remainder of the Calleguas Creek areas appear to have adequate drainage to avoid the hazard, except for the lower Arroyo Conejo. The latter may have an increasing problem because the discharge from the City of Thousand Oaks Hill Canyon Wastewater Treatment Plant contributes to higher groundwater levels in the western Santa Rosa Valley area and along the Arroyo further to the west. Thousand Oaks may have problems in the low lying valley areas, including Hidden Valley, because of their alluvial nature.

The information used to define the hazard zones on Figure 2.6 was the best available but does not allow precise delineation of hazard areas. Also, the boundary lines represent a transition zone which fluctuates seasonally, with changes in water supply. Therefore, those facilities

listed are not the only ones that could be affected by the hazard. These, however, should be studied first when alleviation of the hazard is considered because of the higher probability of their being affected by the hazard.

2.6.4 NATURE OF THE INFORMATION

Data on the water surface level was taken from the extensive well records maintained by the Ground Water Section of the Ventura County Flood Control and Water Resources Department. These well records include up to 50 years of actual measurements at approximately one-month intervals. However, certain areas did not have usable well records. For these areas, either other special reports were used or actual field data was collected. One of the areas field-checked was Pleasant Valley. Alluvial areas are shown on Plate I of the State Division of Mines & Geology report entitled: Geology and Mineral Resources Study of Southern Ventura County (see Bibliography).

The water table levels in alluvial areas were arrived at by taking the highest figure measured from the extensive records of the Ground Water Section of the County Flood Control and Water Resources Department. The boundaries of the hazard zones are only approximations and are not accurate enough upon which to base any building code requirements. In addition, the estimated effects of liquefaction may vary greatly within a given zone during a given earthquake. Any specific conclusions should be reached on the basis of detailed site-specific soils and geologic studies.

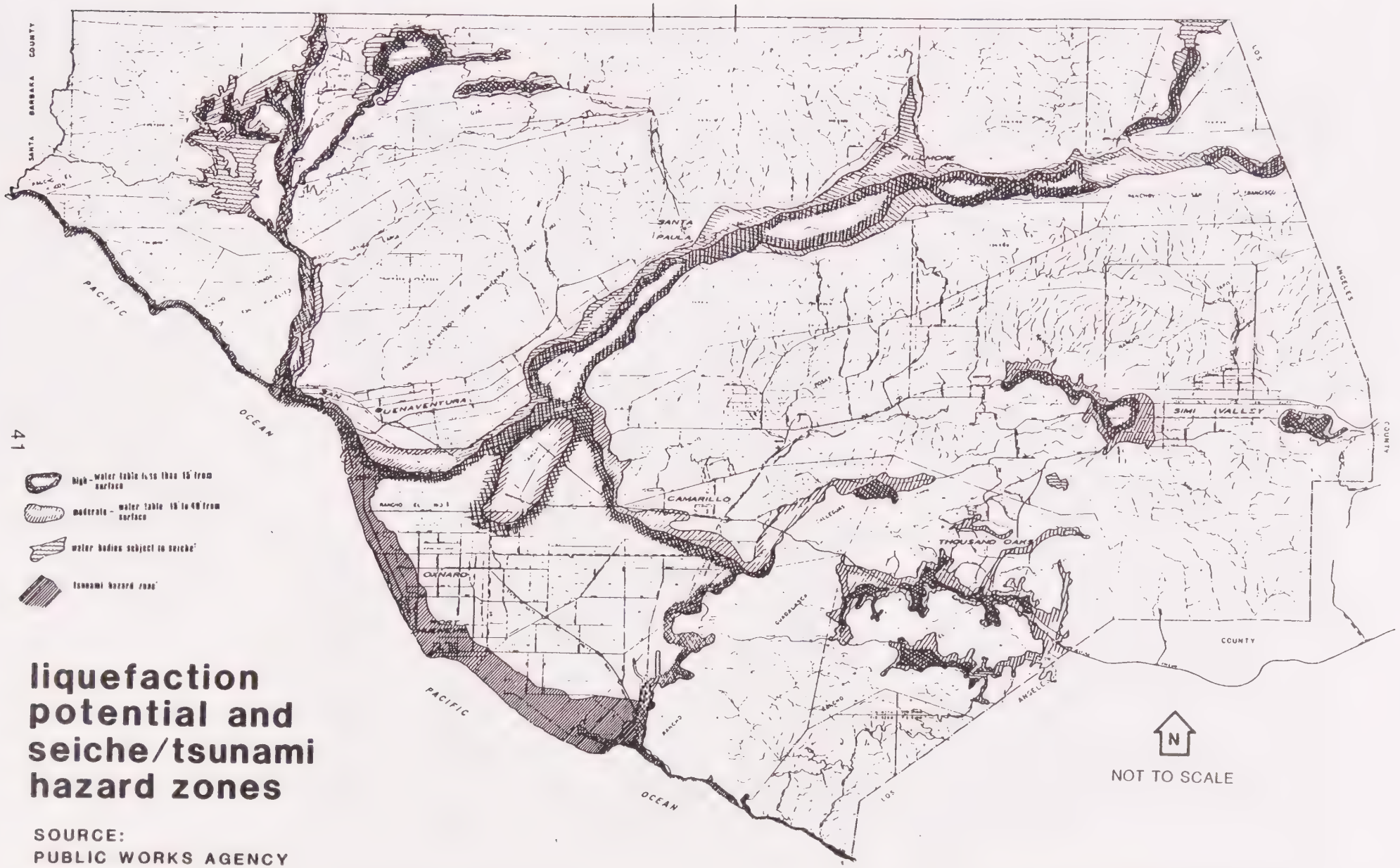
2.6.5 CONCLUSION

Liquefaction has not yet been a damaging hazard in Ventura County, but along with its attendant ground shaking, it is possibly the biggest seismic threat in the County.

The hazard exists wherever there are certain soils, particularly loose sand soils, that are constantly or seasonally saturated with water. This might include most of the river valleys and the low lying plains areas that have poor drainage. Since subsurface soil properties are not precisely known, it is necessary to assume that all alluvial areas having high groundwater may be subject to liquefaction during strong ground shaking. If general surface liquefaction were to occur, most structures in the hazard zone could be affected to a greater or lesser degree.

There is little that can feasibly be done to reduce the regional liquefaction hazard. Important or critical structures can utilize special designs to alleviate the effects of the hazard, except possible in areas subject to landsliding. Land use controls are the only other methods available to reduce the threat to life and property.

Special attention should be given to the liquefaction potential in evaluating the adequacy of existing critical or essential facilities in the high hazard areas, since the threat may be quite severe, especially to larger buildings.



liquefaction potential and seiche/tsunami hazard zones

SOURCE:
PUBLIC WORKS AGENCY
VENTURA COUNTY PLANNING DIVISION OCT. 1974

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.6

2.7 SUBSIDENCE

2.7.1 LOCATION OF THE HAZARD

"Subsidence" is any settling or sinking of the ground surface arising from surface or subsurface causes. A very significant area in Ventura County, the Oxnard Plain, is experiencing subsidence. Current data suggests that groundwater has been extracted from the aquifers underling the Oxnard Plain at a rate that exceeds the rate of replenishment; this is referred to as "overdraft." Overdraft of water for agricultural, domestic and industrial uses increased from about 32,000 acre-feet per year in 1959 to about 44,000 acre-feet per year in the mid-1970s; overdraft for 1986 was estimated at about 33,000 acre-feet. The water table has dropped as much as 55 feet below sea level as a result of this continuous overdraft. This situation has been monitored by the U.S. Coast and Geodetic Survey since the 1930's. Up to 1965, one large area was subject to subsidence of between 0.04 and 0.05 feet per year. A single point located at Hueneme Road and Highway 1 has dropped 1 1/2 feet in just 21 years. Records to 1968 show a dozen bench marks that indicate that the ground may have settled a foot in a fifteen- to twenty-year period. It is probable that the subsidence problem in the Oxnard Plain area will continue, possibly at an increasing rate. This could occur if extraction of fluids from this area is increased.

The Santa Clara River poses another problem. It is building up sediments within its present course while no longer adding deposits to the remainder of the Oxnard Plain. If the old deposition sites having had an opportunity to consolidate and establish a gradient difference between themselves and the present river course, a flood could change the river course and thus inundate the lower land. Extraction of fluids could increase the potential for such an occurrence and increase the area affected if the extraction adds to the subsidence.

Figure 2.8 shows three subsidence zones. These zones are: probable subsidence of 0.05 feet per year; probably subsidence of less than 0.05 feet per year; and the estimated limit of areas presently affected by subsidence. The first and most severe of these categories reaches roughly from Pierpont in the north to the Mugu Lagoon in the south and extends east on the Oxnard Plain to the junction of Highways 1 and 101. The last two categories extend inland from the more severe subsidence on the Oxnard Plain ultimately up through the Santa Clara River Valley to a point just east of Piru.

2.7.2 GENERAL EFFECTS OF THE HAZARD

As with the destruction which is caused by expansive soils, that caused by subsidence is generally not of an immediate or violent nature. Except when prompted by seismic shaking, the compaction of alluvium and settling of the land surface is a process that occurs over several years.

Subsidence which results from groundwater withdrawal can be responsible for numerous structural effects. Most seriously affected are long surface infrastructure facilities which are sensitive to slight changes in

gradient. Drainage courses, wells and utility lines are potentially the most vulnerable to damage. Basically, the process by which this most important type of subsidence occurs involves the extraction of a large quality of water from an unconsolidated aquifer. As water is removed from the aquifer, the total weight of the overburden which the water used to help to support is placed on the alluvial structure; the overburden can then become compressed. If fine-grained silts and clays make up portions of the aquifer, the additional load can squeeze the water out of these layers and into the coarser grained portions of the aquifer. All of this compaction produces a net loss in volume and hence a depression in the land surface.

Subsidence caused by oil and gas extraction is similar in effect to that caused by water extraction. In one example, oil extraction was responsible for $100,000,000 in damages to various facilities and structures in the Long Beach area.

Perhaps the most hazardous subsidence for Ventura County is that which might be caused by ground shaking in the area of the Oxnard Plain. Strong ground motion from an earthquake could result in the liquefaction of fine-grained materials. This would cause a loss of ground support and the land surface could settle. Unlike other forms of subsidence, this one could occur in a short period of time.

Inundation must be viewed as a potentially serious secondary effect of subsidence in the County. Both the ocean and the Santa Clara River could flood into depressed areas of the Oxnard Plain. If a naturally low area is further depressed by the action of subsidence, it is reasonable to assume that the damage will be more severe than if the subsidence had not occurred. In the case of the coastal portion of the Oxnard Plain, beach erosion could extend further inland due to the additional loss of elevation caused by subsidence.

Numerous other secondary effects can be identified. Most of these are related to the disruption of services provided by various structures which might be damaged by subsidence. Loss of life would probably occur only as a secondary effect of subsidence, say as the result of flooding.

2.7.3 NATURE OF THE INFORMATION

Forecasting the extent, rate and magnitude of subsidence is difficult. A series of benchmarks must be established to measure any vertical change. This will, over time, provide information regarding the location of subsiding land and indicate which areas are subsiding fastest. Core samples can then be taken and compaction-tested to determine probable future consolidation. Combining this information with fluid withdrawal rates (if any extraction is occurring) can make prediction of future subsidence possible. From this point, the desirability of either planning for the subsidence in terms of regulated land use or counter-measures to halt the subsidence could be assessed.

Thus far, the only information available on subsidence in Ventura County has to do with its approximate rate and extent. No reports are available on causes or damage. Subsidence resulting from oil and gas extraction has

been investigated by the U.S. Geologic Survey, California Department of Water Resources and the California Division of Oil and Gas. In addition, studies of water withdrawal subsidence have been conducted by the U.S. Geologic Survey and the California Department of Water Resources.

Definite and detailed establishment of the rate and/or cause of subsidence in Ventura County has not been made. Public Works information indicates four possible causes: natural consolidation of alluvium, tectonic deformation, water extraction, and/or oil extraction. An analysis would necessitate detailed investigations over a five- to ten-year period into such areas as fluid withdrawal - both amounts extracted and types of formation withdrawn from. If, as a result of this analysis, it was found that human activities were responsible for the subsidence, then measures could be taken to halt or even reverse the process.

2.7.4 ALLEVIATION OF THE HAZARD

Adverse effects are moderated to some degree by State and Federal projects which provide surface water to areas with dropping groundwater tables. In areas where such assistance is not available or where a project does not make up all of the difference, then control of the problem is the responsibility of local water conservation districts. This control is both loose and variable (Urban Geology Master Plan For California, p. 48). It now appears that at least in the case of withdrawal subsidence, proper management could prevent continuing damage.

Since the removal of groundwater has been determined to cause or contribute to subsidence in other areas of California, consideration should be given to curtailing the further removal of groundwater at rates exceeding the natural recharge rate of the groundwater system. Experience in other parts of the State indicates that reductions in the extraction of groundwater can significantly reduce the rate of subsidence. In areas of unconfined aquifers, reduced withdrawal or increased recharge through water-spreading is necessary. Confined aquifers or oil-bearing zones must be repressured by injection wells in order to stop subsidence. This is a very costly procedure. (A confined aquifer has an impervious layer above it; an unconfined aquifer does not).

2.7.5 CONCLUSION

Some potential subsidence damage can be controlled. Such controls, however, must await the definite determination of the cause or causes of subsidence, as well as the rate of this subsidence. Until this information is fully developed, little can be done to plan for or respond to this hazard. If human activity, such as extraction of fluids, is determined to be the principal cause, then regulatory action could halt the subsidence. However, if natural processes are responsible, control is much less easily exercised.

In the meantime, efforts to reduce the rate of overdraft of aquifers should continue, and construction in subsidence hazard areas should be avoided. The collection of data on rates of subsidence will help to refine our knowledge of subsidence, and will also help in the search for solutions.

2.8 EXPANSIVE SOILS

2.8.1 GENERAL

"Expansive soils" are soils that expand when wet and contract when dry. Historically, expansive soils have caused considerable damage in Ventura County. In the early 1960's, numerous homes were lost and many more were severely damaged in the Shadow Oaks Tract, adjacent to the City of Thousand Oaks. This area experienced soil expansion which cracked many two-inch-thick slabs. As the damage started to appear in the new homes of this tract, many of them were vacated. Other houses were rented; a transient group of people occupied these and the neighborhood generally declined. In time, repairs saved some homes while others were replaced using sturdier construction techniques. The Shadow Oaks case was primarily responsible for the establishment of more stringent building code requirements. Since the initial damage in the 1960s, engineering studies have resulted in design techniques and procedures which provide for safe and economical construction on expansive soils. Local building ordinances have incorporated these techniques and procedures. This has allowed construction even in areas where the hazard is severe.

2.8.2 The resources most often affected by expansive soils are structures. Even though expansive soils are scattered throughout the County, their potential impact on structures is limited to just a few developed areas: portions of the Ojai Valley, the Camarillo Hills and areas around the community of Moorpark. The presence of expansive soils in these developed areas presents no threat, however, because soils tests and engineering solutions can overcome the dangers of expansive soils.

The only phenomenon that must continue to receive special attention, with regard to expansive soils, is downslope soil creep in hillside areas. As expansive soil expands and contracts, it tends to move downslope in response to gravity. This condition may require flatter slopes, soil removal and special landscaping and irrigation treatment.

General information concerning the shrink-swell potential of the County's soils have been provided in the 1970 Soil Survey by the Soil Conservation Service. This investigation shows a scattering of such soils and thus indicates the necessity for individual investigations of local soil conditions.

Three expansive soil zones have been mapped; and they appear on Figure 2.8. Derived from the Soil Survey, this map designates high, moderate and low expansive zones. This is a generalized version of individual soils maps. It generally indicates those areas where expansive soils are present (see Soil Survey in Ventura Area, 1970).

A more specific map was prepared for each entity, and the degree of expansiveness may not conform precisely to Figure 2.8 even though both utilize identical categories of expansive soils. The reason for this is

that the local maps were taken from the nongeneralized maps developed by the Soil Conservation Service and thus display a greater level of detail.

While the general and specific maps are quite useful for locating large areas of potential hazard, they cannot be used in lieu of site inspection when construction is considered. A soils test at the specific site is necessary because this hazard is so localized in nature. Otherwise, it appears that no further information is needed about the general occurrence of expansive soil in the County, and the only action necessary to prevent damage is a process which requires the appropriate soils information be developed and applied to the specific site. Through proper investigation and design, the potential for damage can be eliminated.

2.8.3 ALLEVIATION OF THE HAZARD

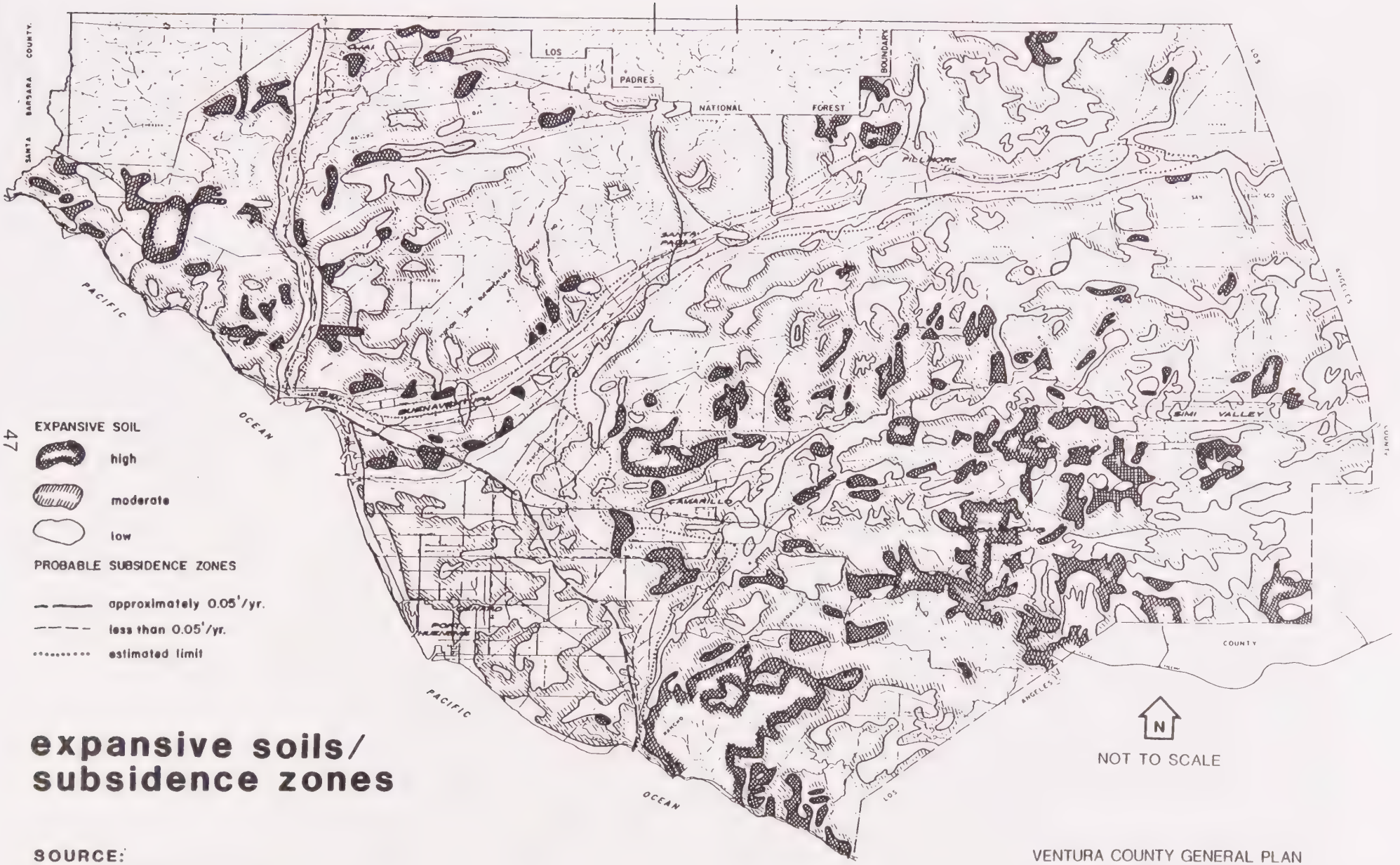
It is generally accepted that the expertise exists both to identify the problem and provide solutions. Soils engineers can locate problem areas and foundation engineers can design countermeasures.

Numerous agencies have established standards to eliminate the potential for structural damage due to expansive soils. Both HUD and FHA have codes to be followed if expansive soils are present. The United States Department of Agriculture Extension Station have recommendations based on their Soil Survey of Ventura County. In addition, the State Subdivision Map Act and the Uniform Building Code exert some control in areas where this hazard exists. Among the measures which might be employed are various foundation construction techniques, including proper drainage. The degree of expansiveness, as revealed in the expansion test, dictates the type of foundation design.

2.8.4 CONCLUSION

The resources most often affected by expansive soils are structures. Even though expansive soils are scattered throughout the County, their potential impact on structures is limited to just a few developed areas: portions of the Ojai Valley, the Camarillo Hills and areas around Moorpark.

The County Building and Safety Division oversees the building permit and inspection processes. These processes, which have effectively ended the dangers of expansive soils, include soils tests at each construction site and the enforcement of building standards keyed to varying degrees of expansive soils. Through proper investigation and design, the potential for damage can be eliminated.



expansive soils/ subsidence zones

NOT TO SCALE

SOURCE:
SOIL CONSERVATION SERVICE
DEPARTMENT OF AGRICULTURE

PUBLIC WORKS AGENCY OCT. 1974

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.8

2.9 LANDSLIDES/MUDSLIDES

2.9.1 GENERAL

"Landslide" is a general term for the dislodging and fall of a mass of soil or rocks along a sloped surface, or the dislodged mass itself. A "mudslide" is a flow of very wet rock and soil. Landsliding can be considered a major hazard in any hillside area. Most destructive landslides have resulted from the indiscriminate development of sloping ground or creation of cut and/or fill slopes in areas of unstable or inadequately stable geologic conditions. Many of these landslides could have been prevented by recognition of potentially unstable geologic conditions through adequate investigation and incorporation of design safeguards prior to grading or construction.

The hazard of landslides, however, is not always confined to areas commonly considered hilly or mountainous. Under certain soil and ground moisture conditions landsliding can occur in areas of nearly level ground. This was clearly demonstrated by landsliding triggered during the San Fernando earthquake of 1971 which resulted in destructive lateral ground movement over large areas with regional slopes of as little as 1½ percent. Conditions which could result in similar lateral spreading or low-angle landsliding may exist in some areas of Ventura County.

The following simplified classification system is adopted from Geological Hazards (Bolt et al., 1977):

Movement	Material Behavior	Type	Rate	Names
Fall	Brittle	Rock, Ice Cemented Soils	Rapid	Rockfall, Icefall Soilfall
Slide	Unstable	Rock, Soil Snow	Rapid to Slow	Rotational slump Planar block glide Lateral spreading Slab Avalanche
Flow	Stable	Rock Fragments, Sand Silt, Clay Snow	Rapid to Slow	Rock flow Sand run Earth flow Mud flow Avalanche

If the flow is taking place very slowly, the movement is referred to as creep, which is an extremely common phenomenon, probably occurring on every hillside in the world. Creep is imperceptible in the majority of these cases unless very precise measurements are performed.

In general, most landslides within the County are shallow, ranging up to perhaps 100 feet in depth and limited in extent, generally less than 100 acres. Most are not presently in motion (active), but have moved downslope to positions of stability. Generally, stability is achieved within several years after the initial failure under natural conditions.

Many of the existing landslides can be reactivated and downslope movement renewed after exceptionally heavy rainfall periods or as a result of an earthquake. Generally, the renewed movement of old landslides is slow, perhaps only a few inches per day. However, the formation of a new landslide can be rapid with initial, often sudden movements of hundreds of feet within a few hours.

Since the advent of grading equipment and the continuing development of valleys and plain areas, hillside and coastal areas in Southern California have come under increasing pressure for urban development. As a result, man's activities involving cutting, filling, drainage diversions, irrigation, use of on-site sewage disposal systems and stripping of vegetation from slopes have also become major factors in the formation of new landslides and the reactivation of previously stable ones.

The construction of highways, hillside housing developments, dams, reservoirs, drainage and utility structures normally involve the movement of substantial amounts of soil or rock on slopes. Operations that include the addition of material to the top of a slope or the removal of soil or rock from its base encourage slope failure.

Man-made slides may occur during grading operations or after grading operations in hillside development. Those that occur during grading operations are generally not as hazardous nor as expensive to repair as slides that occur after development. Slides that occur after grading are an indication that the problem was not detected during grading, that sufficient corrective and preventive measures were not taken, or that stable conditions were modified after grading (Man-Made Landslides, F. B. Leighton, 1966).

According to Bolt et al. (op. cit., 1977): "In extreme cases, landslides take place during or immediately following the construction process, but the effects of construction can be very subtle in many circumstances. The placement of fill material for a road across a hillside...may interfere with the natural regime of water flow and drainage through the soil or rock. In this way the weight of the material is perhaps increased or the water pressure is changed in the pores of the soil or in the rock interstices. Either consequence can give rise to a slide which occurs months to years after the completion of construction."

2.9.2 NATURE OF THE INFORMATION

The potential landslide areas within the County were determined mainly by aerial photographic interpretation. The information is considered to be fairly accurate. Knowledge of many locales, especially within or adjacent to areas of urban development, was gained through experience in the particular area and field checking of some areas.

The present information is the best form available and is considered adequate for general planning purposes. It will, however, need to be supplemented with more detailed mapping or studies for any specific proposed development.

2.9.3 GENERAL INVENTORY OF THE HAZARD

Southern Ventura County

The widespread landsliding and slope instability throughout much of southern Ventura County can be related to a great degree to the intensity of past faulting and folding of strata and to the clay content of certain sedimentary formations, as well as to subsurface moisture content. In general, the highest propensity for landsliding is found along the more prominent fault zones, near anticlinal folds, and in areas of the younger geologic formations. It is apparent that the combination of these three factors has resulted in relatively intense areas of landsliding such as along the rincon and hillsides south of the Santa Clara River.

Landslides and potentially unstable slopes are especially common in hillside areas underlain by sedimentary bedrock of the Pico, Santa Barbara, Monterey/Modelo and Rincon Formations. These formations are generally uncemented (soft) and contain abundant silt and clay strata.

Many landslides are also associated with steep slopes which have been undercut by erosion (such as the several landslides along the easterly side of Big Sycamore Canyon northeast of Point Mugu) and downslope inclination of bedding planes (such as in the Ventura Anticline area). The presence of subsurface water is also a contributing factor to slope instability in the great majority of landslide occurrences.

Landslides and slope instability are widespread throughout the hillside areas. In general, most existing landslides are within the Existing Landslide Areas shown on Figure 2.9; most are not of recent origin, having occurred over 100 years ago, and most are not actively moving. However, they are subject to potential renewal movement if triggered by poorly planned grading or earthquakes, or if the ground moisture is increased. The areas of landsliding are, in general, confined to the areas of weak or clay bedrock and adverse geologic structure (such as bedding planes dipping in downslope directions).

Figure 2.9 is a composite map showing landslide hazards within the southern County area. The Existing Landslide Areas designation includes area of major landslide features. The High Landslide/Mudslide Hazard zones indicate areas of marginal hillside stability which could e subject to major landslide occurrence. In general, the aforementioned categories are confined to areas containing ground surface slopes of 15% or more. Intermediate Hazard Zones are those that could be subject to less severe landslides, but which have a definite risk slope, generally 10-15%. The Little or No Hazard Zone indicates areas which slope at less than 10% and not generally affected by landsliding. Active Beach Erosion is indicated for those areas which have, historically, been subject to severe wave erosion, which is considered a form of slope instability. Beach erosion per se, however, will be treated as a separate study within this Appendix.

The Hazard Zone boundaries were primarily determined based on information provided by two studies of landslide conditions in southern Ventura County (conducted by the State Division of Mines and Geology for the Federal Department of Housing and Urban Development (HUD) and for the County of Ventura under a cooperative agreement). The product of the latter study was the report, entitled "Geology and Mineral Resources Study of Southern Ventura County" (1973), Preliminary Report 14.

Little is known of the potential of landsliding or lateral ground movement resulting from liquefaction in Ventura County. However, some areas may have conditions conducive to this type of hazard. They are the areas along the beach from Point Mugu to the Ventura River, including areas adjacent to harbors, marinas and sea level channels, and inland between Seaward Avenue and the Ventura River.

Northern Ventura County

Landsliding is not believed to be of such widespread occurrence in the northern county area as to present any significant hazard. However, the region is extremely mountainous with steep slopes and local relief in most areas ranging from 200 to several hundred feet. Faulting and severe folding and tilting of bedrock strata is common, as are steep slopes. Another widespread condition which affects the stability of hillsides is the general aggressive downcutting of stream channels.

The relative stability of the older bedrock throughout the region, in spite of the rugged physiography, has been the prime factor resisting the incidence of more widespread landsliding. However, many hillsides and existing landslide features are only marginally stable and only slight changes in existing environmental conditions, such as would result from grading or irrigation, could trigger massive landsliding. In other words, the stability of many slopes is critically fragile and would, upon geologic investigation, be shown to be inadequately stable for most types of development.

2.9.4 CONCLUSION

Existing landslides should be recognized and, in general, their surfaces and immediate adjacent areas should not be developed. However, detailed examination may indicate that it is feasible to stabilize some of these features by buttressing, etc., and thereby utilize their surfaces for some form of appropriate development.

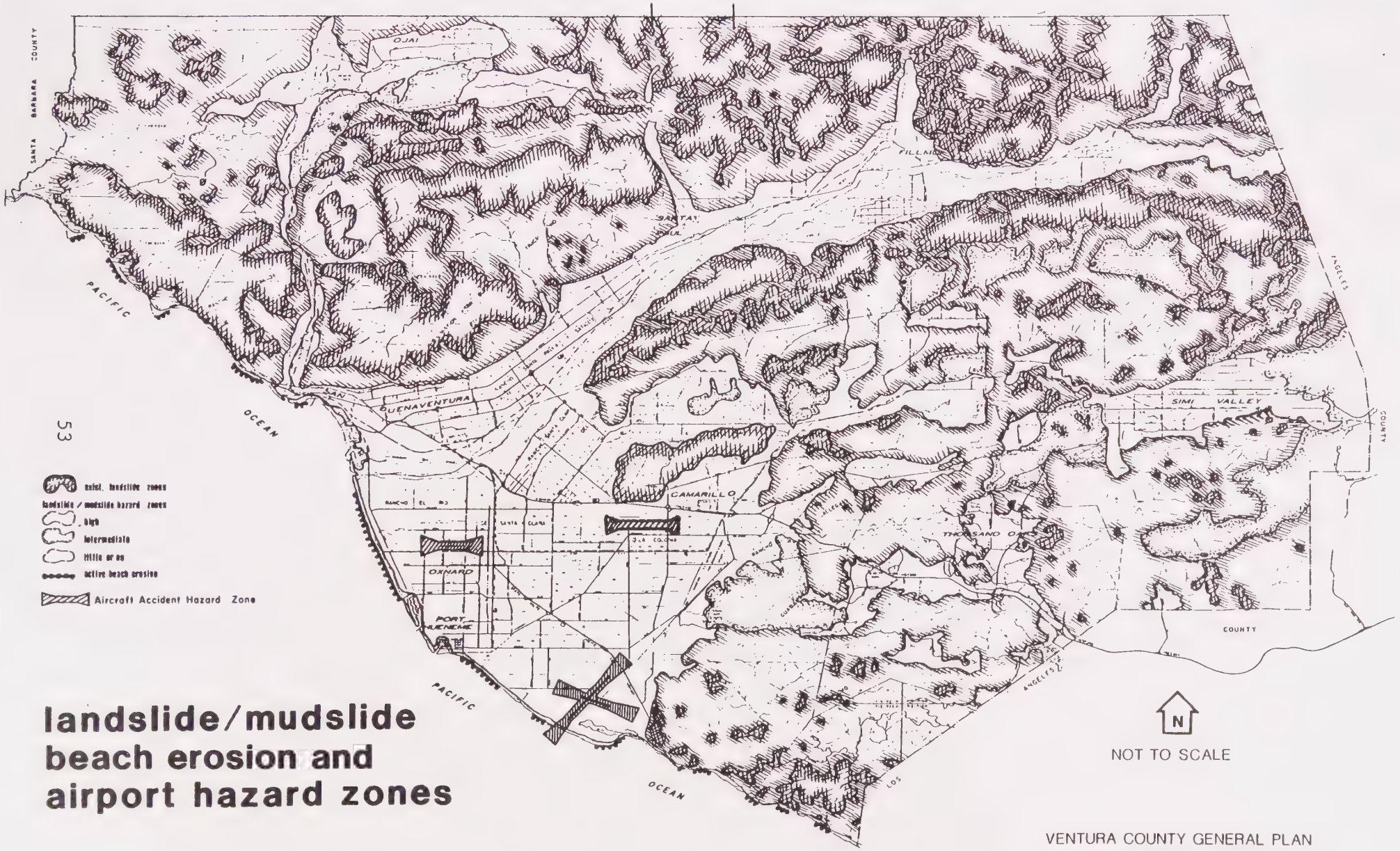
Construction in hillside areas could, of course, result in formation of new landslides if the grading or development design in such areas does not continue to take into consideration potentially adverse conditions which may exist in areas presently unaffected by landsliding. Uncontrolled grading or introduction of irrigation or onsite sewage disposal in areas underlain by ancient landslides could trigger renewed movement.

Most areas of landslides and adjacent marginally stable slopes will not be economically feasible to develop because of the massive grading necessary to effect stability. Such grading involves the leveling of hilltops and

ridges, and filling of the intervening valleys and canyons. Only the smallest landslides can generally be stabilized to allow development of their surfaces. Moreover, most structures cannot be economically designed to withstand the forces of landsliding.

Approximately 75% of the total area of Ventura County can be considered as mountainous or hillside areas. Even the southern half of the County, which includes the Oxnard Plain, consists of about 60% hillside or sloped ground. Residential development has extended on to some hillside areas within the county. Much of this development occurred prior to establishment of many of the present ordinance requirements concerning evaluation of hillside stability and incorporation of design provisions to safeguard against landsliding. Cut-slopes in which support has been removed can give way one by one during succeeding wet seasons; their ultimate failure is inevitable. However, since most of the presently developed areas lie outside of the areas of potential landsliding in hillside areas, the present county-wide hazard can be considered low. The hazard can increase as more development occurs in hillside areas unless adequate geologic investigations of hillside areas are conducted and stability considerations are incorporated into development plans.

Development of County Subdivision and Grading Ordinances, land development policies and building codes over the past several years has progressively resulted in greater public safety. The present requirements are considered equivalent to, or exceed, those of other counties in California, and are considered adequate to ensure that areas of landsliding or areas prone to landsliding are not indiscriminately developed and that adequate measures are incorporated in grading and building design to ensure that landsliding will not occur.



landslide/mudslide beach erosion and airport hazard zones

NOT TO SCALE

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.9

SOURCE:
CALIF. DIV. OF MINES & GEOLOGY
PUBLIC WORKS AGENCY OCT. 1974

2.10 AIRPORT HAZARDS

2.10.1 GENERAL EFFECTS OF THE HAZARD

The primary effects on the ground of aircraft accidents are injuries to people and damage to property in the area of impact. The severity of accidents varies greatly, depending on the weight, speed, and fuel load of the aircraft. The amount of destruction resulting from an accident also depends on the land uses in the impact area. Fewer lives would be threatened by a crash into a single-family house than by a crash into a school.

The secondary effects of aircraft accidents are more difficult to assess. It appears that some residents in the areas under flight patterns are often fearful of planes crashing into their houses. Combined with the problems of noise, this fear can result in pressures from residents to end or restrict airport operations.

2.10.2 NATURE OF THE HAZARD

The most critical stages of the flight of an aircraft are takeoff and landing; a significant proportion of aircraft accidents occur during these stages. The initial climb, which involves the greatest thrust of power, may lead to mechanical failure. During the landing phase, accidents may result from the misjudgment of the angle of approach or speed, or the inability to prevent a premature touchdown by increasing power and thrust. Such problems are mitigated by the use of instruments and visual landing guides. If a pilot experiences engine failure or other catastrophic problem and must crash-land off the runway, he will attempt to direct the aircraft away from structures and land in a clearing. Thus the purpose of the hazard zones depicted on Figure 2.9 is to delineate areas where there should be minimal construction, thus reducing the potential for human injury and property damage in the event of a crash-landing or other accident. Discouraging construction in these zones also has the effect of limiting the number of people who will be exposed to the high noise levels generated by aircraft operations.

Oxnard and Camarillo airports had a combined total of over 340,000 annual aircraft operations in 1988. With an additional 80,000 aircraft operations at Point Mugu NAS and an estimated 70,000 at Santa Paula Airport, the airspace in which these airborne activities are conducted can be, at times, heavily congested. While there will always be the potential for accidents, those historically involving serious or fatal injuries have been few in number. The Camarillo Airport received an FAA staffed air traffic control tower in 1989 which provides positive control over all aircraft within the Camarillo Airport Traffic area.

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2.10.3 ALLEVIATION OF THE HAZARD

The Federal Aviation Administration sets standards for the height of structures near airports. These standards are aimed at preventing accidents by assuring a clear airspace. The FAA can only enforce its regulations at public airports, but the State Department of Aeronautics, which has similar standards, can refuse certification to private airports used by the public.

Projects identified in the Environmental Impact Report (EIR) for the Camarillo Airport Noise Control and Land Use Compatibility Study will accommodate greater numbers of aircraft on the airfield, and enable aircraft operations to increase. This will also increase the potential for accidents. However, the following projects will tend to enhance safety by providing pilots with more information: the construction of an air traffic control tower, visual navigation air improvements (based on specially-designed lighting systems), and the installation of one of two alternative state-of-the-art landing systems.

Three projects identified in the Environmental Impact Report for the Oxnard Airport Noise Control and Land Use Compatibility Study will have the effect of improving safety: removal of the 756-foot displacement threshold at the western end of Runway 7-25, the addition of taxiway lights on the south side of the parallel taxiway for the same runway, and the acquisition of the extended runway safety area located immediately east of Runway 25 and across Ventura Road.

The Naval Air Station at Point Mugu is a Federal government installation, and is therefore not subject to County planning controls. Moreover, local jurisdictions are not required to prepare plans for land use around military airports (Public Utilities Code, Sec. 21675[b]). Nevertheless, the County will continue to apply the same limitations on construction within the hazard zone of this airport that are applied to other airport hazard zones. (Note: The Hazard zones used for the Point Mugu Naval Air Station are based on the Navy's accident potential zones, which were developed from an analysis of all Navy aircraft accidents for 5 years). A thorough analysis of conditions at NAS Point Mugu is contained in the Air Installation Compatible Use Zone Study, dated 1977.

Portions of this Airport Hazards section have been excerpted from the Oxnard and Camarillo Airport plans. These plans and their EIRs should be consulted for further information on these airports. (The Santa Paula Airport and the hazard zone around it are located within the City of Santa Paula).

2.10.4 CONCLUSION

The airports in the County have excellent safety records, and therefore the degree of risk associated with airport hazards is minimal. Airport management and safety are thoroughly dealt with in the plans for each individual airport. The County will continue to promote safety in airport hazard zones by prohibiting high-intensity development in these areas.

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2.11 COASTAL WAVE AND BEACH EROSION

2.11.1 GENERAL INVENTORY OF THE HAZARD

A beach responds with great sensitivity to the forces that act upon it -- waves, currents, winds. Beaches are deposits of material in transition, either alongshore or off and onshore. Ocean beach erosion is therefore a natural phenomenon, as beaches receive or lose sediment from rivers and cliff erosion and through longshore currents which transport sand along the coast. Man has interfered with these natural coastal processes with the construction of harbors, marinas and jetties. Often these man-made structures can drastically alter the natural process of beach erosion and rebuilding, resulting in costly engineering efforts to restore the natural balance.

Beach erosion occurs when the "demand" for littoral material (the amount of material being removed by prevailing conditions) exceeds the "supply." The demand may become excessive as a result of an increase in wave energy, decrease in the source of supply, or a loss of beach material out of the littoral zone. When the demand exceeds the supply, the deficit is made up by the removal of existing beach deposits. Loss of sediment supply to the littoral zone may be due to construction of inland dams on rivers or developments on floodplains. The sediment supply of the major rivers in the Santa Barbara "littoral cell", of which Ventura County is a primary component, has been substantially reduced by upstream dam development on the Ventura and Santa Clara riversheds.

A "littoral cell" is a stretch of ocean shoreline containing a complete cycle of littoral transportation and deposition of sediment. A typical cell begins with a stretch of rocky coast where the supply of sand is limited. In a downcoast direction, determined by prevailing waves and currents, the beaches become gradually wider and the coastline straightens where streams supply a more abundant amount of sand. Submarine canyons or "sinks" may terminate the cell by capturing the supply of sand, thus causing the next littoral cell to begin with a rocky coast nearly devoid of beaches. Because each littoral cell is a closed system, any proposed development on the beach upriver may well have an effect on the sand "budgets" of the beaches downdrift. Thus, the impact of an inland dam is limited principally to the littoral cell fed by the dammed river, so that reducing the amount of sand supplied by the Santa Maria River, for example, would not affect the amount of sand at Ventura.

The local Santa Barbara littoral cell extends from Point Conception to Point Mugu, with some sand migration from north of Point Conception where the Santa Maria Cell lies. The main tributaries to the Santa Barbara Cell are several small coastal streams in Santa Barbara County, coastal bluff erosion and landslides, Rincon area runoff, and the three major Ventura County rivers: the Ventura, the Santa Clara, and Calleguas. Of these, the majority of sand "nourishment" arrives from the Santa Clara River, which drains a vast area of the Transverse Range and associated Ventura Basin lowlands. The Santa Barbara Cell terminates in the Hueneme and Mugu submarine canons. Approximately 800,000 cubic yards of sand is lost down the Hueneme submarine canyon in any given year, representing two-thirds of the littoral drift in this area. Many of the beaches south of Point Mugu are "pocket beaches," supplied primarily with sand from cliff erosion.

Alluvial and erosional sediments are transported to the short, where they are picked up by breaking waves. The longshore movement of sand is caused by the longshore component of wave energy, which is a function of wave height, shoaling coefficient (a measurement of a wave's ability to deposit material on the beach), refraction coefficient (a measurement of the bending of the wave's direction as it reaches shallow water), and the angle at which the wave strikes the beach. More importantly, transport depends on wave period (time between wave crests) and steepness (ratio of wave height to length). During summer, wave periods are long and wave steepness is small, allowing for sand build-up. During winter, this is reversed and sand is moved off-shore, exposing the underlying gravels to increased wave energy and erosion. Sand dynamics also depend on the longshore drift fluctuating between updrift and downdrift. Submarine canyons, projecting headlands, or engineering structures may also trap sand and induce erosion of downdrift beaches. Sand is also lost from the beach by the action of the wind.

Although wave and beach erosion are natural processes which tend to balance out over time, human action has altered this situation by reducing the natural fluvial transport of sediment through construction of inland dams, sand and gravel mining, and development of floodplains. The ability of the large rivers in our area to maintain a sand budget equilibrium may be seriously impaired by the interception of sediments by dams and sand and gravel mining. Other man-made causes of erosion include the construction of seawalls, groins, jetties, breakwaters and harbors. With the exception of harbors, these engineering devices are considered to be erosion control devices. However, their long-term effect may be to exacerbate the beach erosion problem.

Areas subject to wave and beach erosion are identified in the Local Coastal Plan. The Central Coastal region is not considered especially vulnerable to beach erosion because of the extensive sand replenishment projects located in this section (Ventura River to Ormond Beach). In the North Coast section (from Rincon Point to the Ventura River), the following areas are subject to beach erosion hazards:

- Mussel Shoals: This beach exhibits seasonal fluctuations in the amount of sand. A seawall had to be constructed during the 1978 winter storms. Erosion is gradual now, but may accelerate later.

- Seacliff: Homes in this area flood during storms and high tides. Construction of the U.S. Highway 101 overpass north of the colony obstructed sand transport and beach replenishment.

- Hobson County Park: Severe beach erosion prompted Caltrans to build a revetment at this beach. The intensity of wave action in the area has led to concerns about the wall's structural adequacy; it may need additional improvements.

- Faria Beach Park: This beach area has been severely damaged by erosion at the rate of about 1.3 feet of shoreline per year, and the park has been closed several times because of storm debris. The Department of Navigation and Ocean Development (DNOD) has also classified this area as "Present Use Critical". At the current rate of erosion, protective structures will be needed to preserve the recreation area.

- Faria Beach Colony: Erosion and flooding at high tide are continuing problems here. Seawalls are being undermined. The Department of Navigation and Ocean Development sees this area as "Future Use Critical".

- Solimar Beach Colony: Erosion is weakening the existing seawalls in this area. If homes are to be protected, then improvements will have to be made. This area is "Present Use Critical".

- Old Coast Highway: Waves top the revetment and create intermittent hazards for motorists.

- Old Coast Highway: Waves top the revetment and create intermittent hazards for motorists.

- Emma Wood State Beach: This beach is eroding 0.6 feet annually, and recent winter storms have caused extensive damage and led to closure. DNOD recognizes a portion of the park as "Future Us Critical" and another segment as "Present Use Critical".

On the South Coast, both Point Mugu State Park and the Solomar area are threatened with severe erosion problems.

2.11.2 ALLEVIATION OF THE HAZARD

There are several techniques that can be utilized to alleviate the hazard of beach erosion. In addition, this problem is addressed in the County's Coastal Plan, and by the Beach Erosion Authority for Control Operations and Nourishment (BEACON).

2.11.2.1 Traditional Methods

Solutions to wave and beach erosion require an understanding of both the mechanisms of the Santa Barbara Littoral Cell and of the man-made actions noted above. It is important to note that the primary concern with loss of beach sand is that the sand acts as a buffer, protecting the coastal land from wave erosion. In areas where the beach is backed by cliffs, as on the coast south of Point mugu or on the Rincon, this may result in erosion of the cliffs. Where the beach is adjacent to flat land, sand depletion may lead to inundation of inland areas.

A related problem is the erosion of coastal bluffs in our North and South Coast areas. Erosion of these bluffs are also a natural phenomenon which, on its positive side, contributes to sand formation. However, transportation and housing in these coastal bluff areas is severely impacted by bluff erosion. Bluff erosion is caused by chemical weathering, mechanical action of waves, undercutting by waves, and by drainage from various sources of runoff.

Management of coastal wave, beach and bluff erosion requires a variety of engineering responses. Some of the techniques which are in use or envisioned include:

- Dredging sand from offshore sand deposits;

- Dredging accumulated sand from our marinas and harbors;

- Dredging accumulated sediment behind local dams and transporting it to the beach;
- Dredging from Hueneme or Mugu submarine canyons and transporting sand back up the coast;
- Mining sand from inland sources, such as sand dunes or flood plains, and transporting to the beach;
- Construction of groins to reduce the rate of littoral transport of sand; and
- Use of seawalls, riprap, jetties and breakwaters.

All of these techniques involve potential environmental impacts which must be weighted against their positive benefits. With respect to bluff erosion, the most important preventive measures involve the avoidance of the following: artificial watering, increased surface runoff, and placement of structural loads near bluff edges.

Problems with riprap and seawalls relate to their cost and to their tendency simply to transfer beach erosion downcoast. They also require expensive periodic maintenance and reduce to some extent the aesthetic qualities of the beach. Groins and jetties act to interrupt transfer of sand downcoast until such a time as their placement has reached equilibrium, having built up the upcoast beach and caused beach reduction downcoast, when longshore sand transport resumes. Again, problems emerge which may result in costly dredging operations. Breakwaters are offshore riprap structures which are designed to dissipate wave energy. They work well at beach erosion control, but require very careful design with relationship to distance from shore.

2.11.2.2 Local Coastal Program

The State-mandated Plan for the Coastal Zone sets forth a variety of policies related to beach erosion, and requires strict conformance with the State Coastal Act. Erosion control structures which are discussed above are required to be assessed for environmental impacts and reviewed by County agencies with respect to structural soundness and effect on adjacent and downstream structures, net littoral or longshore drift, and downcoast beach profiles. In addition, the Coastal Plan requires engineering reports detailing potential impacts with respect to the aforementioned structures, as well as provisions providing for guaranteed public beach access.

2.11.2.3 Beach Erosion Authority for Control Operations and Nourishment

In response to the continuing threat of wave and beach erosion, local agencies have formed a common group to address these problems. The Beach Erosion Authority for Control Operations and Nourishment (BEACON), consisting of the cities of Carpinteria, Oxnard, Port Hueneme, Santa Barbara and Ventura; Ventura and Santa Barbara Counties; Ventura and Santa Barbara County Flood Control Districts; Santa Barbara County-City Area Planning Council; Ventura Port District Channel Islands Harbor District, Channel Islands Beach

Community Service District; California Coastal Commission; State Parks and Recreation and Boating and Waterways Departments; and the U.S. Army Corps of Engineers, was formed to provide regionally-coordinated shoreline protection measures for the area between Point Conception and Point Mugu. In September, 1987, BEACON received a State grant of $400,000 to study sand accumulation near harbors and offshore basins, areas in need of sand replenishment, quantities of sand needed, and potential source of replenishment.

BEACON has established the following goals based on the shared needs and concerns of its member agencies:

- Develop an understanding of the processes controlling shoreline changes along the South Coast, and a means to predict future changes as a function in incident wave climate and shoreline development.

- Develop a regionally coordinated program to manage existing sand resources in a manner which is both economical and environmentally sound.

- Identify and develop regionally coordinated mitigation measures to prevent future damage to coastal resources.

- Develop viable methods to fund needed studies and economically feasible mitigation measures on an ongoing basis.

- Develop an education/outreach program directed at increasing the public awareness of the regional nature and interrelatedness of beach erosion problems.

The agenda of BEACON is directed at achieving these goals. Representatives from the participating agencies and jurisdictions meet bimonthly. Although the Group has no authority to establish regional beach erosion control policy, it has made considerable progress toward achieving its goals by working with interested individuals, organization, and government representatives.

2.11.3 CONCLUSION

In the long term, wave and beach erosion hazards will continue to plague the Ventura County coastline. Attempts to develop local and regional control measures to alleviate beach erosion are absolutely essential if we are to maintain our coastline and its many uses. However, long term sea level changes threaten further progress in this area. Because of this, a continuing program of monitoring of beach erosion problems and mitigation to avoid severe erosional losses is necessary and will remain an important task facing all County agencies with a stake in maintenance of our Ventura County beaches.

2.12 FLOOD HAZARDS

2.12.1 GENERAL EFFECTS OF THE HAZARD

The primary effect of flooding is the threat to life and property. People and animals may drown; structures and their contents may be washed away or destroyed; roads, bridges, and railroad tracks may be washed out; and crops may be destroyed. The amount of damage caused by a flood depends on the depth of inundation, the velocity of flow, the duration of the flood, the debris production of the watershed, and the erodibility of the bed and banks of the watercourse.

Much of the property damage from floods is caused by the severe erosion which results from fast-moving flood waters. Serious damage can also be caused by the floating debris and sediment carried by flood waters. Floating debris (including parts of buildings, trees, etc.) can obstruct the flood flow, resulting in increased flood heights and overflow areas. Debris can also damage structures and bridges, and can damage or plug flood control channels. Mineral and organic debris and sediment deposited on land create a serious cleanup problem and health hazard, and can destroy crops and croplands. Floods may also create health hazards due to the discharge of raw sewage from damaged septic tank leach fields, sewer lines, and sewage treatment plants, and due to flammable, explosive, or toxic materials being transported by flood waters. In addition, vital public service may be disrupted.

2.12.2 LOCAL HISTORY

Damaging floods in Ventura County were reported as early as 1862; on average, floods have occurred every five years since then. (The St. Francis Dam failure in 1928 caused the largest known flood on the Santa Clara River.)

The largest and most damaging recorded natural floods in the Santa Clara and Ventura watersheds occurred in 1969. In 1969, the 50- and 100-year peak discharges were approximated in many channels. The combined effects of the 1969 food were disastrous: thirteen people lost their lives, and property damage estimated at 60 million (1969) dollars occurred. Homes in Casitas Springs, Live Oak Acres, and Fillmore were flooded and 3,000 residents in Santa Paula and several families in Fillmore were evacuated twice. A break in the Santa Clara levee threatened the City of Oxnard. Much agricultural land, primarily citrus groves, was seriously damaged or destroyed. All over the County, transportation facilities, including roads, bridges, and railroad tracks, were damage. The Fillmore, Oak View, and Ventura sewage treatment plants were severely damaged, dumping raw sewage into the Santa Clara and Ventura Rivers and polluting beaches. In addition, sewer trunk lines were broken along San Antonio Creek and the Ventura River.

2.12.3 LOCATION OF THE HAZARD

Flood plain limits are established by the Federal Emergency Management Agency, and calculated from the best topographical information and hydrologic and hydraulic data available. These delineations reflect existing conditions; changes in topography or land uses could affect the

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limits. The flood plains of many of the watercourses in the county have not been mapped.

2.12.4 ALLEVIATION OF THE HAZARD

The flood hazard may be alleviated through a variety of measures, some corrective and some preventive. Corrective measures include warning and relief programs, flood-proofing of existing structures, and the construction of flood control works (channel improvements, levees, and dams). Flood warnings are issued by the U.S. Weather Bureau or the Flood Control District, and relayed to the public through the local news media and Sheriff's and Police department.

Structural works are the traditional means of alleviating flood hazards through prevention; but such facilities are extremely costly and are rarely able to keep up with development. The cost of structurally containing all the channels in the County Flood Control District's comprehensive plan has been estimated at over 300 million (1969) dollars (VCFCD, The Great Floods of 1969, p.2).

Other preventive measures for alleviating the hazard include public acquisition of flood plain lands, public information programs, development policies and regulations. The most effective means of preventing flood damage appears to be flood plain management (i.e., the regulation of the types of activities permitted in flood hazard areas). Flood plain management addresses the problems encountered in the utilization of flood plains and considers the total spectrum of possible solutions to problems involving possible future land uses. Flood plain management cannot, however, protect all existing development. Therefore, to provide for the maximum alleviation of the flood hazard, a combination of corrective and preventive measures is necessary.

The issue of flood plain management is dealt with in several sets of regulations. Pertinent regulations are contained in the Subdivision Ordinance and Building Code, which require that buildings and improvements be protected from flood damage. This provision is enforced by the County Divisions of Planning and Building and Safety, based on the recommendations of the Flood Control District. The standard condition imposed on development is that the homes be protected (by elevation, channel improvement, dikes, or flood-proofing) from the 100-year flood (see Figure 2.12). Further regulation is provided by the County's Flood Plain Management Ordinance (Ordinance No. 3841).

The Ventura County Flood Control District, which is governed by the Board of Supervisors, has the authority to maintain and construct flood control facilities on the channels shown on the District's Comprehensive Plan. Ordinance FC-18, adopted in 1972, requires that a permit from the Flood Control District be obtained for most activities with the bed and banks of these channels.

Outside of these limits, the prime responsibility for regulating activities in flood hazard areas lies with local governments. The regulations of the National Flood Insurance Program, which is administered by the Federal Emergency Management Agency, require that communities adopt land use restrictions for the 100-year flood plain in order to qualify for Federally-subsidized flood insurance. The type of restrictions

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communities must adopt are listed in some detail in the regulations; included is a requirement that residential structures be elevated above the level of the 100-year flood and that other types of structures be flood-proofed. Participation in the flood insurance program is virtually mandatory, since flood insurance (within identified "special flood hazard" areas) is a prerequisite for receiving mortgages or construction loans from federally-regulated lending institutions. Disaster assistance was not available to public agencies in hazard areas if they did not participate in the program. Thus, the County must be, and is, a participating community in the National Flood Insurance Program in order to qualify for disaster assistance in the event of a declared natural disaster.

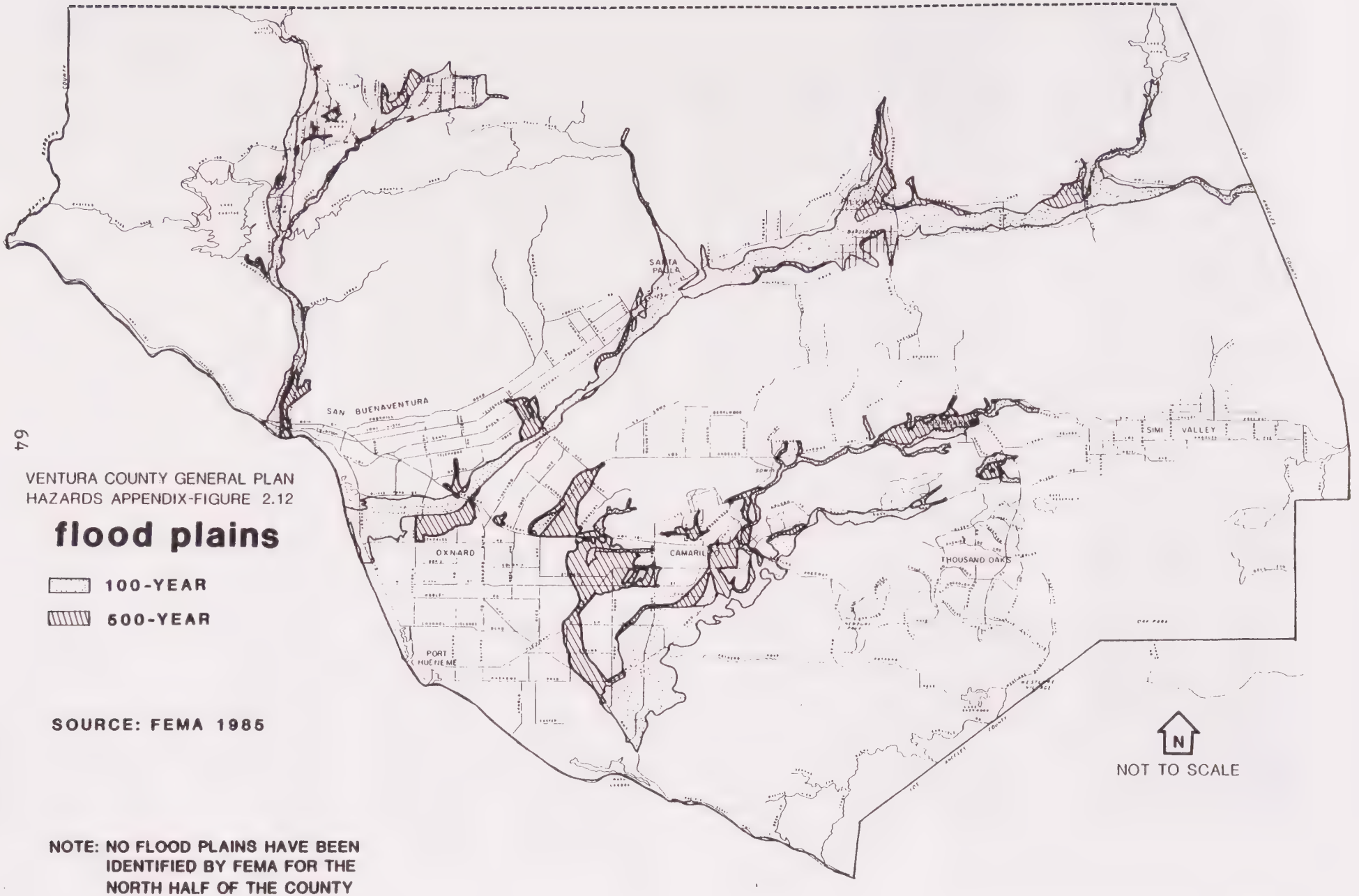
2.12.5 CONCLUSION

Floods are natural occurrences whose frequency and magnitude depend on the rainfall and drainage patterns. It can be expected that the flood plain will probably be completely inundated on the average of once every 100 years. Past floods indicate that loss of life, property damage and loss of economic production could be extensive. In addition, funding for flood damage is limited and is costly to the public in general. The most appropriate uses for flood plains are open space uses such as greenbelts, parks and some types of agriculture.

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VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.12

flood plains



100-YEAR

500-YEAR

SOURCE: FEMA 1985

NOTE: NO FLOOD PLAINS HAVE BEEN IDENTIFIED BY FEMA FOR THE NORTH HALF OF THE COUNTY

2.13 INUNDATION FROM DAM FAILURE

2.13.1 NATURE OF THE HAZARD

The need for dam failure disaster planning was locally demonstrated by the midnight collapse in March 1928 of the St. Francis Dam in Los Angeles County. A major disaster occurred after the newly constructed cement arched dam was completely filled for the first time. The ensuing flooding from the dam's total collapse resulted in the loss of over 400 lives in Ventura County as flood waters washed out homes and structures along the banks of the Santa Clara River. The Communities of Piru, Fillmore, Santa Paula, Bardsdale, Saticoy, Montalvo and El Rio sustained extensive life and property loss from the flood.

More recently, the San Fernando Earthquake in 1971 resulted in ground shaking in the vicinity of the Van Norman Dam in Los Angeles County. As a result of the earthquake, structural damage threatened the dam's immediate collapse. Approximately 80,000 residents in the San Fernando Valley had to be evacuated to areas of safety in the midst of many other earthquake-related emergencies.

The lessons learned from these events and others are outlined in California's Dam Safety Act (Section 8589.5 California Emergency Services Act). This legislation requires the preparation of dam inundation maps showing areas of potential flooding in the event of sudden or total dam failure as well as emergency procedures for notification and evacuation of nearby residents.

In Ventura County, disaster coordination and planning is the responsibility of the Sheriff's Department through its Office of Emergency Services (OES). The OES serves as the depository for the County's Dam Inundation Maps and is charged with ongoing maintenance of the County's Dam Failure Response Plan which was adopted by the Board of Supervisors on September 13, 1983. The Dam Failure Response Plan is currently being updated by the OES.

2.13.2 CONCLUSION

While the prospects of dam failure are generally considered remote, the possibility of such an event cannot be taken lightly in view of the widespread potential for damage and loss of life.

A list of dams with inundation potential in Ventura County is attached (see Figure 2.13.1). Areas subject to inundation in the event of a dam failure are depicted on Figure 2.13.2; this diagram is for illustrative purposes only and does not indicate specific areas that may be affected be failure of specific dams. Detailed information of the latter type may be obtained from the agency that owns the dam in question.

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Figure 2.13.1

DAMS WITHIN THE STATE OF CALIFORNIA WITH INUNDATION POTENTIAL IN VENTURA COUNTY

DAM/RESERVOIR NAME	OWNER	CAPACITY ACRE-FEET	TYPE	FLOOD ROUTE	IMPACTED AREAS IN VENTURA COUNTY	SPECIAL FEATURES
Bard Reservoir (Wood Ranch)	Calleguas Mut. Water District	11,000	Earth	Arroyo Simi	Simi Valley, Moorpark, Camarillo	
Bouquet Canyon	Los Angeles City (Dept. of Water and Power)	36,500	Earth	Santa Clara River	Fillmore, Bardsdale, Santa Paula, El Rio, Oxnard, Pt. Mugu, Pierpont Bay	Dam near S.A. Fault Zone (5 miles)
Casitas Dam	Bureau of Reclamation	254,000	Earth Fill	Coyote Creek Ventura River	Casitas Springs, Ventura Ave.	Short Time for Warning
Castaic Dam	State/Water Resources (MWD Uses)	325,000	Earth	Santa Clara River	Piru, Fillmore, Bardsdale, Santa Paula, Oxnard Plain	High Potential for Debris
Drink Water* Reservoir	Los Angeles DWP	80	Earth	San Francisquito Canyon	Santa Clara River	River Drainage
Dry Canyon*	Los angeles City DWP	1,140 (Maintained Empty)	Hydrofill	Santa Clara River	Immediate Vicinity of River	Hydrofill
Elderberry* Flood Basin	Los Angeles City DWP	33,000	Earth	Santa Clara River	Fillmore, etc.	Drains into Lake Castaic

Figure 2.13.1 (cont'd)

DAM/RESERVOIR NAME	OWNER	CAPACITY ACRE-FEET	TYPE	FLOOD ROUTE	IMPACTED AREAS IN VENTURA COUNTY	SPECIAL FEATURES
Ferro Debris* Basin	V.C. Flood Control District	7,900	Earth	Beardsley Wash Revlon Slough	Agricultural Area, Highway 118	
Lake Eleanor	Conejo Open Space and Conservation Agency	128	Constant Radius Arch	Eleanor Creek	Westlake Blvd. to Westlake	Concrete Arch (1881) Short time for Warning
Lake Sherwood	Murdock Dev. Company	2,694	Constant Radius Arch	Potrero Creek	Westlake area of Thousand Oaks	Concrete Arch (1904) Short time for Warning
Las Llajas Reservoir	V.C. Flood Control District	1,250	Earth	Las Llajas Canyon	Simi Valley (midsection)	
Las Posas Estates Debris Basin*	V.C. Flood Control District	42	Earth	Beardsley Wash		
Las Virgenes Reservoir (Westlake)	Las Virgenes Mun. Water District	9,700	Earth	Flows into Ventura Co.	County line and Westlake	

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Figure 2.13.1 (cont'd)

DAM/RESERVOIR NAME	OWNER	CAPACITY ACRE-FEET	TYPE	FLOOD ROUTE	IMPACTED AREAS IN VENTURA COUNTY	SPECIAL FEATURES
Matilija Dam	V.C. Flood Control District	1,800	Variable Radius Arch	Matilija Creek Ventura River	Matilija Hot Springs, Friends Ranch, County Dump, Live Oak Acres, County Honor Farm, Casitas Springs, and Ventura Riverbed	Dam Declared unsafe (Notch reduces storage capacity, monitored bi-weekly by VCFCD)
Meiners Oaks*	M.O. Co. Water Dist.	15 (out of service)	Earth			
Sycamore Canyon*	V.C. Flood Control District	890	Earth	Arroyo Simi	Simi Valley	Inundated by Bard (Wood Ranch)
Pyramid Dam	State/Water Resources	179,000	Earth Fill	Piru Creek, Santa Clara River	Piru, Bardsdale, Fillmore, Santa Paula, Oxnard Plain	Flows into Lake Piru (Santa Felicia Dam)
Runkle Debris Basin	V.C. Flood Control District	100	Earth	Runkle Canyon	Simi Valley (Midsection)	
Santa Felicia Dam (Lake Piru)	United Water Conserv. Dist.	100,000	Earth	Piru Creek, Santa clara River	Piru, Bardsdale, Fillmore, Santa Paula, Montalvo, Ventura, Oxnard, Pt. Hueneme	Short time to Piru

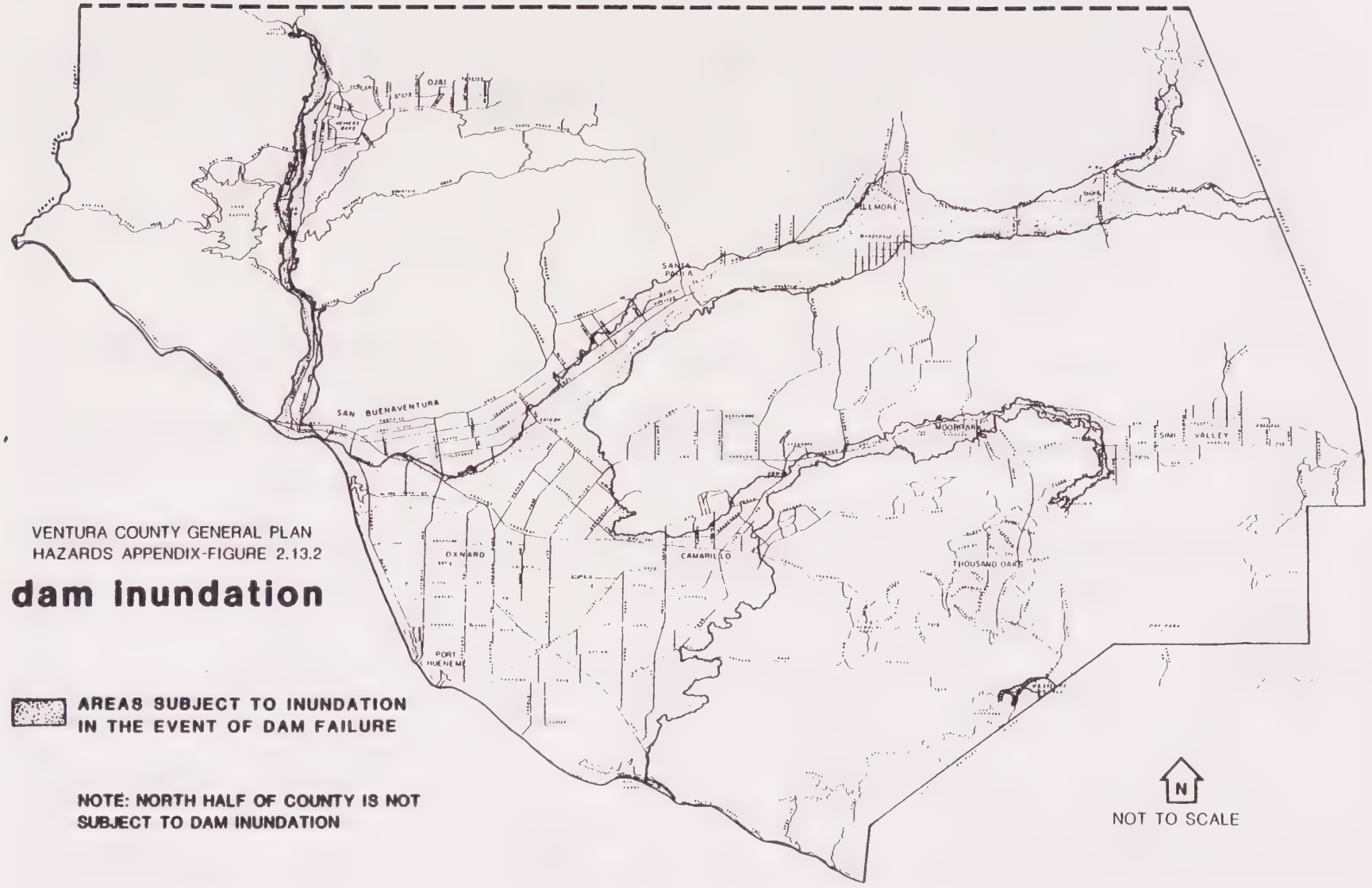
Figure 2.13.1 (cont'd)

DAM/RESERVOIR NAME	OWNER	CAPACITY ACRE-FEET	TYPE	FLOOD ROUTE	IMPACTED AREAS IN VENTURA COUNTY	SPECIAL FEATURES
Senior Canyon Reservoir	Senior Canyon Mutual Water Co.	78	Earth	Senior Canyon, San Antonio Creek	Ojai	
Sinaloa Lake	Sinaloa Lake Home Owners Assn. Jim Stetsmon Fred Shultz Bill Hodson Bill Seaman	200	Earth	Oak Canyon Arroyo Simi	Simi Valley	Inundated by Bard (Wood Ranch)

Compiled by Ventura County Office of Emergency Services from information obtained from Ventura County Flood Control, State Division of Safety of Dams, and Dam Owners.

* Exempted by State Office of Emergency Services (OES) from preparing Dam Inundation Plans or Inundation Maps for Ventura County.

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VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.13.2

dam inundation

AREAS SUBJECT TO INUNDATION IN THE EVENT OF DAM FAILURE

NOTE: NORTH HALF OF COUNTY IS NOT SUBJECT TO DAM INUNDATION

NOT TO SCALE

SOURCE: VENTURA COUNTY PLANNING DIVISION
COMPILED FROM VARIOUS SOURCES - 1987

2.14 FIRE HAZARDS

2.14.1 NATURE OF THE HAZARD

Ventura County is subject to a wide range of fire hazards throughout the year. From a planning perspective, wildfires in natural areas cause the most extensive damage, and are therefore the main subject of this section.

Our area is characterized by a Mediterranean-type climate, featuring wet winters and very dry summers. In addition, the local meteorological phenomenon of Santa Ana winds contributes to the high incidence of wildfires in our area. These winds originate during the summer months in the hot, dry interior deserts to the east of Ventura County. They often sweep west into our area, bringing with them extremely dry air masses which can exacerbate existing fires and further desiccate the chaparral and sage plant communities during the period of the year when the constituent species have a very low moisture content. Figures 2.14.1 and 2.14.2 list County fires since 1952 that have burned over 1,000 acres.

The most important factors influencing flammability of chaparral and sage are the moisture content of both living and dead plant matter; fuel loading, which refers to total plant biomass in a given area; and the ratio of dead to living plant matter. Moisture levels are high during the winter rainy season and progressively lower through the dry summer months. When the ratio of dead fuel to living fuel increases and when moisture content is low, fire susceptibility increases dramatically. In addition, the history of plant succession in a particular area is important in predicting fir susceptibility. For several years after a fire, easily flammable herbaceous species predominate and increase the likelihood of new fires. When the woody species become re-established, they contribute to a lower overall level of fire susceptibility for approximately the next ten years. After this, the slow aging plant community becomes ever more likely to burn due to increased levels of dead plant material and lowered plant moisture levels. Other factors influencing the likelihood of fire include the ratio of herbaceous species to woody species (grass burns more readily than manzanita) and slope exposure (southern exposure slopes tend to be drier and more fire-prone).

2.14.2 GENERAL EFFECTS OF THE HAZARD

The primary effects of fires are generally well-known. Fires can cause loss of life, injury, and the destruction of buildings, as well as the destruction of wildlife, both plant and animal. Fires can also have a number of secondary effects.

Public utilities are often strained by fires; water supplies can be depleted, power lines can be downed and telephone systems can be disrupted. Flood control facilities may be severely taxed by the increased flow from the denuded hillsides and the resulting debris that washes down. Recreation areas that have been affected must also be forced to close or operate at a reduced scale. In addition, the buildings that are destroyed by fires are usually eligible for re-assessment which reduces income to local governments from property taxes.

The fires themselves usually last only a few days, but their effects can last much longer. If a grassland area has been burned it will resprout the following spring; a chaparral community, however, takes three to five years. An Oak Woodland which has had most of the seedlings and saplings destroyed by fire will require at least five to ten years for a new crop to start. Most susceptible to long term damage are coniferous timber stands; it may take fifty to a hundred years for such a forest to re-establish itself.

In addition, the removal of vegetation by fire leaves the soil bare and open for erosion when the rains begin in the fall and winter. The fire kills the surface vegetation, allowing the raindrops to hit the surface with undiminished impact, splashing particles of soil loose which move downhill and are carried away by running water. The fire also destroys most of the roots that hold the soil in place, allowing running water to wash the soil away. Mudslides and mudflows are the results of these processes.

2.14.3 FIRE HAZARD MANAGEMENT

Fire hazard management consists of integrative approaches to both fire suppression and controlled burning, as well as to the related problems of watershed management and the retention of healthy, deep-rooted vegetative growth. With regard to maintenance of vegetative cover, a primary goal is to encourage vigorous, multi-aged stands of chaparral/sage which can respond favorably to periodic fire episodes. In addition, a strong, well-managed vegetative cover is essential for landslide control, especially with slopes ranging from 25° to 45° (beyond which rockslides are most common).

Fire hazard management attempts to manipulate many of the elements discussed above to minimize the chances of fire damage to public and private property, and to wildlife habitats. The specific management tools employed are often quite simple. For example, Ventura County's Fire Protection District requires periodic brush clearance around structures in the chaparral/sage areas. This requirement is based on California Public Resource Code Sec. 4219, which encourages clearance of 30 to 100 feet or more around structures in extremely hazardous areas. In the local area, the Uniform Fire Code, Article 11, identifies requirement for clearance of combustible growth, which follow the State Guidelines in general.

Another important management tool is the Ventura County Waterworks Manual (Sec. 2.33), which includes requirements for minimum fire flow rates for water mains. Section 10.301 of the Uniform Fire Code regulates commercial and industrial projects. Also, minimum road widths for access by fire protection crews and equipment are detailed in the Fire Protection District's "Private Road Guidelines" or by the County or City Road Standards Manual. Planning Division zoning standards for minimum distances between structures also are an effective fire protection tool.

Effective wildfire management in a large county such as ours requires appropriate equipment and facilities. The Fire Protection District has a five-year plan for construction of new facilities which will better serve the growing urban fringe areas, which in most cases are being built within the chaparral/sage fire hazard areas of the County. In addition, the Fire

Protection District will acquire a wide variety of new equipment during 1987-88 to upgrade existing aging equipment, through its Lease/Purchase program as approved by the Ventura County Board of Supervisors in April, 1987. Please refer to the Public Facilities and Services Appendix for further details.

All County road width requirements are considered adequate to allow fire access. The minimum width for a cul-de-sac or loop street is 32 feet, and a cul-de-sac must have a minimum radius of 40 feet. The minimum road width for a minor residential road is 36 feet; all other roads have larger minimum widths.

Another aspect of fire hazard management in Ventura County has been the development of a prescribed burn program as mandated by Senate Bill 1704 (Vegetation Management Program). This program aims at selective burn-off of limited areas of the chaparral/sage in order to prevent future large, uncontrolled wildfires. It also aims at encouraging the natural vegetation cycle of seed germination engendered by natural burns. The natural areas of Ventura County contain extensive chaparral and sage plant communities which are fire -adapted and depend on fire for germination and sprouting; new sprouts grow from the roots and root crowns of many species. All things considered, controlled burning seems to be the best fuel management method currently available, although fuel and fire breaks are also used.

Cooperation among agencies is an integral part of the County's fire hazard management program. The County Sheriff and Fire Protection District cooperate in establishing wildfire response and evacuation plans, as envisioned in the Ventura County Multi-Hazard Functional Emergency Response Plan, now being prepared. Other agencies involved in cooperative planning with regard to fire hazards include Building and Safety (property address coordination); Public Works (street naming coordination); and Planning (review of fire hazard issues in the environmental review process for discretionary permits).

The role of individual property owners in responding to fire hazards is probably the most critical. Because of the large size of the County and the preference of many homeowners to build adjacent to High Fire Hazard Areas, these individuals must assume responsibility for prevention of conditions which encourage property damage during the fire season. Measures which may be taken by property owners include the planting of fire-resistant landscaping, landscape maintenance, clearance of brush around structures, and site design.

Landscaping for fire hazard avoidance requires development of a compromise between minimizing fuel volume and maximizing root depth. This often involves interspersing herbaceous species having low fuel volume and short root systems with woody shrubs having greater root depth and higher fuel volume. Drought tolerance and sprouting ability are also important in fire resistant landscaping. Luckily, most of our native herbaceous and woody plants, when properly spaced, are ideal for fire-resistant landscaping, since they require little water and can tolerate difficult sprouting conditions. The Ventura County Water Conservation Management Plan (July, 1987) contains further suggestions for low-water-using landscape materials which are also effective for fire hazard avoidance.

With respect to site design, new housing should be sited to avoid the path of advancing wildfires. Avoidance of narrow canyons and saddles or the juncture of canyons and ridgetops is suggested. Also, houses on ridgetops need to be set back from hillside edges to avoid fires spreading up the hillside. Structures built in High Fire Hazard Areas should avoid wooden shingle roofs, or exposed wood sliding. Stucco metal siding, brick, concrete block, and rock are much better materials for fire avoidance, although with some of these materials, earthquake damage problems may be of some concern. In past fires, the least damage has occurred where structures a) have nonflammable roofs; b) have brush cleared from around the structure; c) have on-site pumps or other water supplies; and d) are not located directly adjacent to brush areas. Other fire prevention design features are available and are included in the Building and Safety Division plan-check process.

2.14.4 EMERGENCY RESPONSE

Outside of the boundaries of Santa Paula, Fillmore, Oxnard, San Buenaventura, and the Los Padres National Forest, the Ventura County Fire Protection District has responsibility for wildfire suppression on all private land. The County has mutual aid and automatic aid agreements with the four city fire departments and the surrounding counties and cities, as well as local military bases. These mutual aid agreements obligate the departments to help each other in case of a major fire, if such help is requested. Automatic aid agreements obligate the nearest fire company to respond to a fire regardless of the jurisdiction. The State Office of Emergency Service can be called upon for further aid, if necessary, as can Federal agencies, including the Department of Agriculture, the Department of the Interior, and, in extreme cases, the Department of Defense. Private companies and individuals have also assisted.

The Ventura County Fire Protection District constantly monitors the fire hazard in the County, and has ongoing programs for investigation and alleviation of hazardous situations. In case of a major wildfire, owners of homes and inhabitants of communities in the path of the flames are warned of the threat, and evacuation is recommended if the threat is eminent. The responsibility for warning and evacuation is in the hands of the law enforcement agencies, primarily the Sheriff's Department, since most fire hazards exist on unincorporated county territory. Evacuation can only be recommended, not ordered, since no one can force a person to leave his house. Formal evacuation routes are not predetermined, due to the unpredictability of a fire. Thus, law enforcement agencies react according to the needs of each situation.

Responsible public agencies in California, in general, and Ventura County in particular, have developed elaborate systems for fighting brush fires. When weather conditions become severe, all fire fighting personnel are put on alert. When a fire starts, all available personnel are rushed to the scene to keep the fire from developing into a major blaze. If the fire does get out of control and more than the County's own resources are required, mutual aid agreements are put into effect. If the situation becomes a major problem, the State and even Federal aid is available for suppression of the fire.

2.14.5 HIGH FIRE HAZARD AREAS

Figures 2.14.3a and b are based on State Division of Forestry criteria, and indicate areas of Ventura County which are most prone to hazards from wildfires. The degree of hazard is largely based on type of ground cover and slope. It is important to note that with the exception of flat farm lands in the Oxnard Plain and certain other areas, all areas of Ventura County are subject to periodic wildfire episodes.

2.14.6 CONCLUSION

Those communities located adjacent to fire hazard areas could be at risk, but there are few critical facilities located in the hazard zone that are not adequately protected. There are, however, some particularly hazardous lightly populated locations that could be severely damaged in case of a major fire. The areas that have high brush and that have not been burned for quite some time are probably the most susceptible. Most areas of high hazard have burned at least once within the last fifty years. Therefore, these areas could be expected to burn again in the next fifty years unless some method of fuel management is undertaken.

Due to distances of such properties from County fire stations, there may be considerable response time lag for structural fire protection on private lands within the National Forest boundaries. Zoning ordinances and building codes should be directed toward making structures inherently firesafe in these areas.

The hazard of major fires will continue in the County as long as man interacts with the natural vegetation. The hazard can be reduced by an effective ongoing fuel management program. It is more reasonable to expend the funds to control hazardous areas before a conflagration occurs than to expend larger sums to fight the inevitable fire, with the resulting threat to life and property.

The various fire agencies will make every possible effort to save structures during a fire, but their effectiveness depends upon the preventive measures taken before the fire. If the brush has been cleared around the structure, a fire resistant roof installed, a sufficient supply of water is available and access is provided for the fire equipment, then there is an excellent chance to avert major damage. The chances decrease proportionately if any of these precautions are not taken.

After a fire, efforts must be made to reduce the risk from mudslides. This could include reseeding areas by the State Division of Forestry, the Ventura County Flood Control District, or the individual homeowners. Even if reseeding has been undertaken, precautionary measures should be taken to protect communities and individual structures from mudslides.

Figure 2.14.1

1952 TO 1973 FIRES OVER 1,000 ACRES

"Name" of Fire	Start Date	Structure Loss in Dollars	Number of Structures	Acres Affected In County
Warring Canyon	9/14/52	--	--	2,153
Ventu Park	11/7/55	55,285	8	13,840
Hoffman (Red Mtn.)	8/31/55	--	--	1,200
Sexton Canyon	12/26/56	--	--	2,500
Little Sycamore	12/27/56	--	--	1,617
Lake Sherwood	12/28/56	135,560	20	7,747
Conejo Grade	6/18/57	--	--	1,000
Santa Susana Pass	7/3/57	--	--	1,482
Boulder Creek	8/27/57	500	2	3,987
Calumet Canyon	10/21/58	15,355	5	17,000
Broome Ranch	11/26/59	--	--	1,350
Doncon & Fletcher	1/15/61	--	--	2,700
Culbert Lease	12/4/62	9,600	4	5,525
Warring Canyon	8/28/67	27,000	1	3,808
Sence Ranch	10/15/67	236,786	16	17,431
Ditch Road	10/16/67	27,748	13	1,120
Parker Ranch	10/16/67	323,790	48	25,000
Timber Canyon	10/16/67	6,650	8	11,448
Torrey Canyon	11/20/69	--	--	1,800
Ventura City Foothill	9/25/70	61,565	12	5,241
Mayo Brush	9/26/70	119,900	3	4,390 (total 7,290)
Goodenough Road	10/5/71	--	--	2,100
Potrero	9/26/73	1,650	3	12,214
Sence Ranch	9/26/73	--	--	1,008

Source: Ventura County Fire Protection District, 1987

Figure 2.14.2

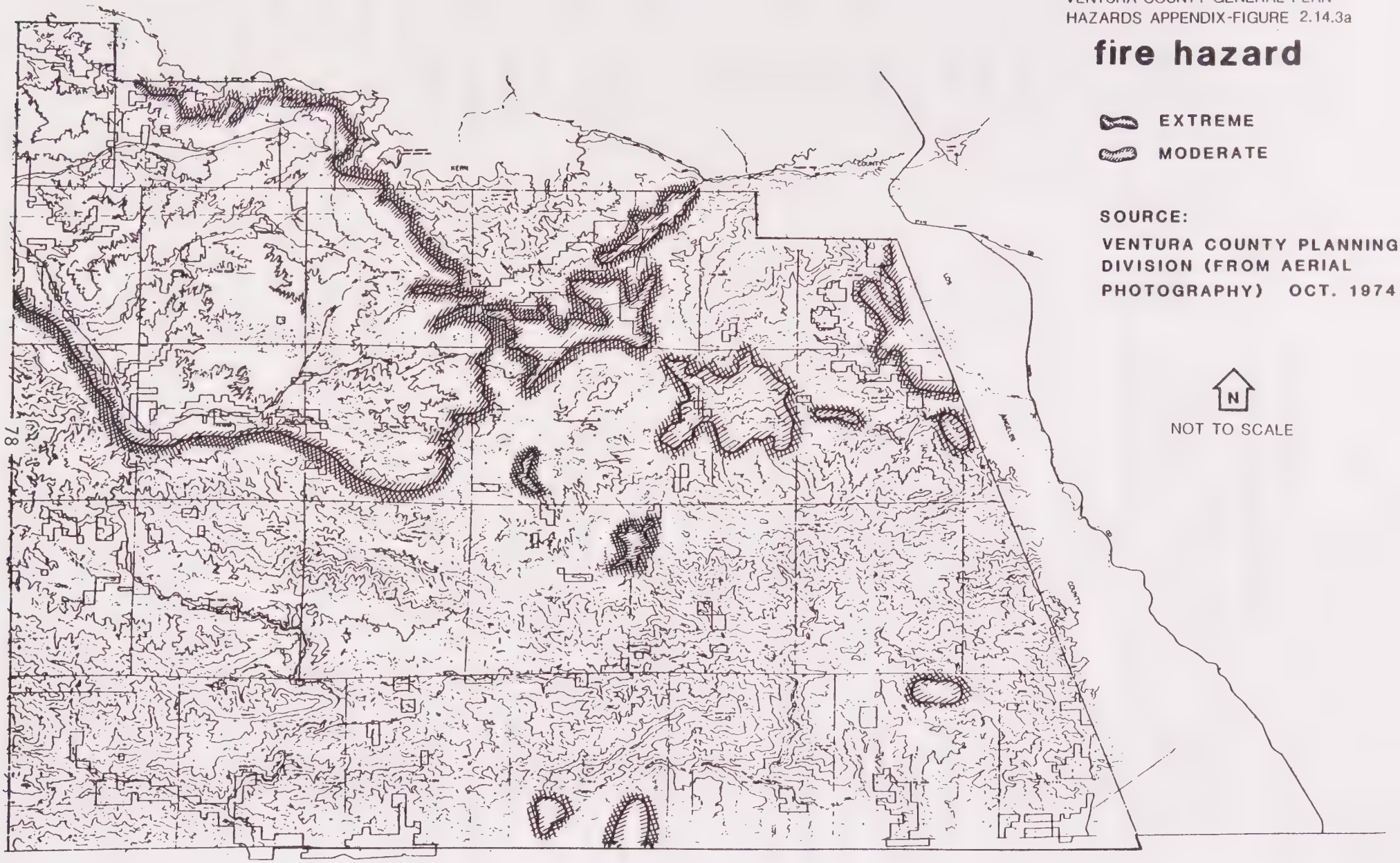
1974 TO 1986 FIRES OVER 1,000 ACRES

"Name" of Fire	Start Date	Structure Loss in Dollars	Number of Structures	Acres Affected In County
South Mountain	11/13/75	--	--	6,500
Potrero	12/28/75	--	--	2,773
Los Robles	6/22/76	--	--	2,000
Santa Susana	9/18/79	--	--	1,003
Creek Road	9/18/79	--	--	32,000
Hill Canyon	10/28/80	--	--	8,700
South Mountain	10/29/80	--	--	3,600
Loma	6/15/81	--	--	1,331
Oat Mountain	10/31/81	--	--	6,005
Haul	10/8/82	--	--	2,627
Matilija	7/7/83	--	--	4,600
Grimes	5/7/84	--	--	11,164
Squaw Flat	10/15/84	--	--	6,010
Wheeler	7/1/85	--	--	118,000
Black Mountain	7/5/85	--	--	1,025
Peach Hill	10/14/85	--	--	1,861
Pioneer	10/14/85	--	--	1,238
South Tapo	10/14/85	--	--	16,995
Ferndale	10/14/85	--	--	47,064
Rocky Peak (Hummingbird)	10/14/85	--	--	1,983

Source: Ventura County Fire Protection District, 1987

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.14.3a

fire hazard



EXTREME

MODERATE

SOURCE:
VENTURA COUNTY PLANNING DIVISION (FROM AERIAL PHOTOGRAPHY) OCT. 1974

N

NOT TO SCALE



fire hazard

SOURCE:
U.S. GEOLOGICAL SURVEY
CALIFORNIA DIV. OF FORESTRY – OCTOBER 1974

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX-FIGURE 2.14.3b

2.15 HAZARDOUS MATERIALS AND WASTE

2.15.1 GENERAL INVENTORY OF THE HAZARD

The growing magnitude of the need for proper management of hazardous materials and wastes is demonstrated by the fact that an estimated 264 million metric tons of hazardous waste were generated nationwide in 1981 according to a national survey conducted by the Environmental Protection Agency. The Southern California Region generated a total of between two and three million tons of hazardous waste in 1983, and it is predicted that this amount will increase by 40 percent by the year 2000 for the Southern California region.

The distinction between hazardous material and hazardous waste is important. Hazardous material is defined as any substance which, if improperly handled, can be damaging to the health and well being of humans. Such materials may be classified as poisons, corrosive chemicals, flammable materials, explosives and oxidizers, reactive materials and radioactive chemicals or substances. Hazardous material becomes hazardous waste when the material has been used for its original intended purpose and is going to be discarded or recycled.

Ventura County generated about 21,000 tons of hazardous waste in 1988. That waste was taken to off-site disposal facilities. Contaminated soil accounted for approximately 52 percent (11,000 tons) of total hazardous waste volume in 1988. Contaminated soils are the result of abandoned waste sites and of leaking underground fuel tanks. Drilling muds and gas scrubber sludge volumes generated by oil and gas production significantly decreased in 1986 due to market conditions. ["Drilling muds" are dense colloidal slurries or gels circulated through well bores to facilitate oil and gas drilling (also see the Goals-Policies-Programs glossary). "Gas scrubber sludge" refers to the liquid or slushy waste remaining after wet gas is put through a water or chemical wash to remove impurities and debris such as silt and clay.] These wastes presently comprise only four percent of total hazardous waste volumes. Ventura County also generates significant volumes of solvents and waste oils. These wastes may be expected to increase in the future, as they are produced by many businesses throughout the County. Solvents and waste oils amounted to about 3,470 tons in 1987 and about 4,600 tons in 1988. Although Ventura County generates a relatively small percent of wastes for the total Southern California area, this amount still contributes to the need for hazardous waste treatment and disposal facilities. This is why a primary goal of hazardous waste management programs is to reduce the amount of hazardous wastes through recycling and on-site treatment to a point where off-site disposal is minimal or no longer necessary. Figure 2.15.2 illustrates the various components of hazardous waste generated in the County in 1988.

2.15.2 NATURE OF THE HAZARD

An example of how industrial chemicals can contaminate the environment, especially groundwater, occurred in Santa Clara County in 1981. Investigations began when a Northern California electronics firm excavated

an area and noticed an unusual smell and color in the soil. It was found that a tank containing 1.1.1. -Trichloroethane (1.1.1.-TCA) was leaking. Further investigation revealed that the chemical had entered local domestic groundwater supplies at a concentration of 29 times the California Safe Drinking Water Standards of 200 parts per billion. The health impacts of 1.1.1.-TCA ingestion are damage to the central nervous system and to the cardiovascular system, loss of coordination, eye irritation and dizziness, depending on exposure. It was also found that the area served by the contaminated domestic water well also experienced a high rate of birth defects and miscarriages in the late 1970's and early 1980's. Accordingly, the California Department of Health Services (DHS) conducted two epidemiological studies of the link between birth defects and the contaminated drinking water. One study found three times the number of birth defects when compared to a control neighborhood. DHS officials concluded that the high incidence of birth defects was unlikely to be explained by chance alone.

In addition to potential health threats, the economic impacts associated with the cleanup of contaminated groundwater continue to escalate. So far, Santa Clara County industries have spent over $80 million for site cleanup and improved storage facilities. These costs have continued to escalate as many more leaking storage tanks have been discovered.

The greatest percentage of soil and groundwater contamination from hazardous materials and wastes in Ventura County is from oil field production wastes such as drilling muds and tank bottoms. ("Tank bottoms" refers to clay and other solids that separate out of well fluid components. These solids contain mineral salts, organic compounds, and a fraction of dense, oil-based compounds.) However, these are not the only sources. In 1983, Ventura County officials found that 10,000 gallons of gasoline had leaked from seven underground storage tanks, and had contaminated groundwater supplies. The fact that one gallon of gasoline can contaminate one million gallons of drinking water to an unsafe level illustrates the extent of the problem and the need for rigorous monitoring of storage tanks. Figure 2.15.2 illustrates the various components of hazardous waste generated in the County in 1988.

Contaminated soils, also a significant waste volume, results from hazardous waste site cleanup operations including underground tank leaks, abandoned sites and accidental spills, and releases of hazardous materials. Contaminated soils represent more than 1-1/2 times the total volumes generated by industrial processes in 1986. The greatest volumes of waste generated by industry in 1986 were alkaline solutions and aqueous solutions (nonmetallic inorganic liquids), solvents, waste oil and sludges. These types of waste can be further reduced and treated prior to offsite disposal.

2.15.3 HAZARDOUS WASTE/MATERIALS PLANNING

The Ventura County Board of Supervisors authorized preparation of the County Hazardous Waste Management Plan (CHWMP) in April, 1986. That plan was prepared by the County and was subsequently approved by the Department of Health Services on January 8, 1990. Although many programs concerning

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hazardous waste management have been established, or are ongoing, they have not been addressed in one integrated plan. Locally, the ten cities, Fire Departments, Sheriff, Police, California Highway Patrol and the County Environmental Health Division are each involved in hazardous waste management in some way through their response to emergency spills and illegal dumping. Given the many diverse programs under the responsibility of several different agencies and governmental entities, CHWMP is intended to coordinate all of these programs to minimize inconsistencies and to ensure that all issues are adequately addressed in one document.

The CHWMP's primary purpose is the topic of hazardous waste management. The intent of the Plan is to provide the public and decision makers with a document that contains information and policies for management of hazardous wastes Countywide. The Plan contains two documents. One is a technical document that presents information and background on the existing Countywide programs for regulation and management of hazardous wastes, and it discusses the issues and problems. The other volume is the actual Plan and Policy document and it contains the recommended solutions, policies, implementation schedules, siting criteria and general areas for facilities developed as a result of the CHWMP planning effort.

Preparation of the CHWMP has also been authorized with the passage of Assembly Bill 2948 (Tanner 1986). The bill requires the preparation of such plans under the guidance of the Department of Health Services (DHS). The Tanner Bill requires the following to be included in a Hazardous Waste Management Plan:

1. Analysis of hazardous waste streams generated in the County, including an accounting of the volumes of hazardous waste produced in the County by type of waste and projection of the expected rates of hazardous waste production through 1994 by type of waste;

2. Description of existing hazardous waste facilities which treat, handle, recycle and dispose of the hazardous wastes produced in the County including facility capacity;

3. Analysis of recycling potential for hazardous waste and volume reduction of hazardous waste at the generation source;

4. Consideration of the need to manage small volumes of hazardous waste produced by small businesses and households;

5. Determination of the need for additional hazardous waste facilities to properly manage the volumes of hazardous waste currently produced or that are expected to be produced during the planning period;

6. Identification of existing hazardous waste facilities that can be expanded to accommodate projected needs and an identification of general areas or specific sites for new hazardous waste facilities that are determined to be needed;

7. Goals, objectives, policies and criteria for siting new hazardous waste facilities and for the general management of hazardous waste through the year 2000;

8. Time schedule for implementation of the Plan by the County and the cities through the year 2000.

2.15.4 CONCLUSION

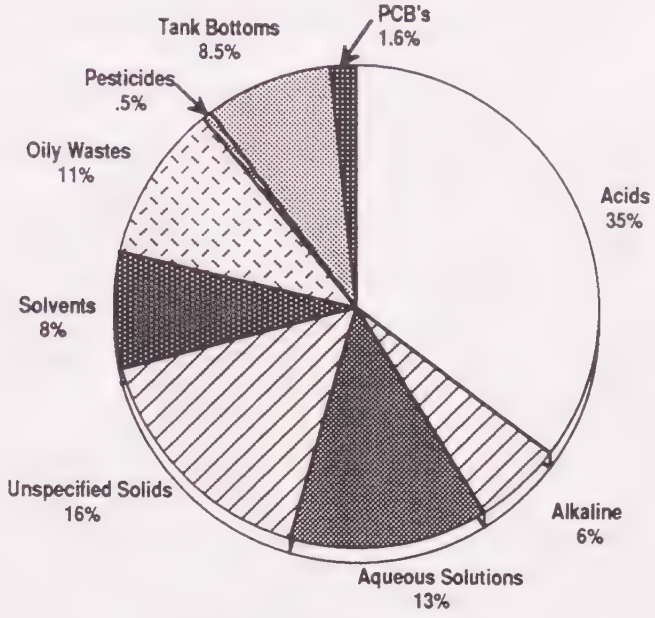
Ventura County generates a relatively small proportion of the total hazardous waste generated in Southern California, but this amount is nevertheless rather large. There are also problems with leaking fuel tanks, contaminated soils, groundwater pollution and illegal disposal methods. As stated in the CHWMP (1989), hazardous waste treatment, transfer, disposal, recycling and incineration facilities are needed for Ventura County wastes. However, not all needed facilities will be located in Ventura County; therefore, the County supports the Joint Powers Agreement among the counties to support facility siting which may serve more than one county's needs. In addition, the primary goal of Ventura County is the support of a Waste Reduction Policy (hierarchy) whereby hazardous waste is managed with first priority given to source reduction, followed by recycling, treatment, and lastly, disposal.

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Figure 2.15.1

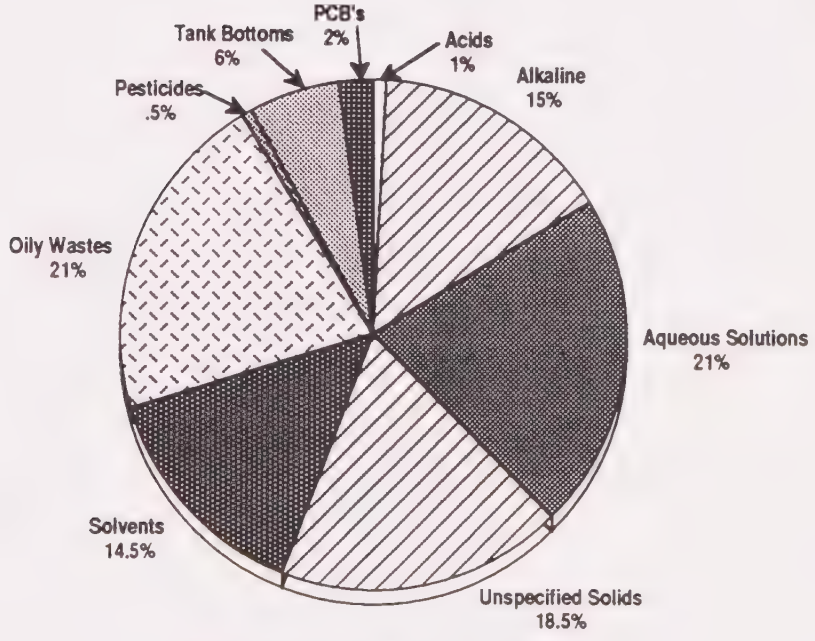
Ventura County Waste Generation Comparison

YEAR 1984



Total Tonnage = 50,717

YEAR 1987



Total Tonnage = 9,792

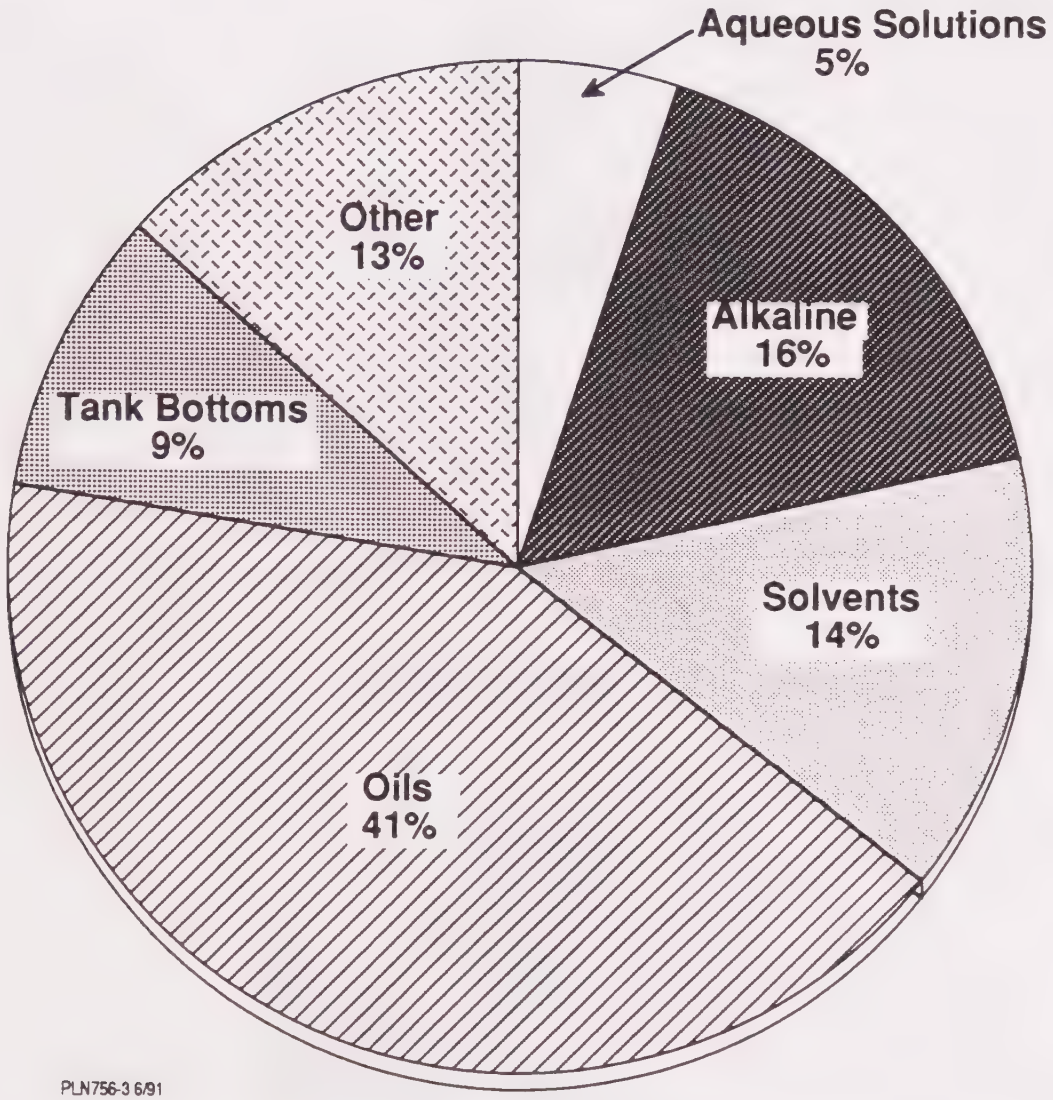
* Drilling muds and contaminated soils not included

Source: *California Department of Health Services, Manifest Information System*

Figure 2.15.2

Ventura County Hazardous Waste Generation

YEAR 1989



Total Tonnage = 14,398

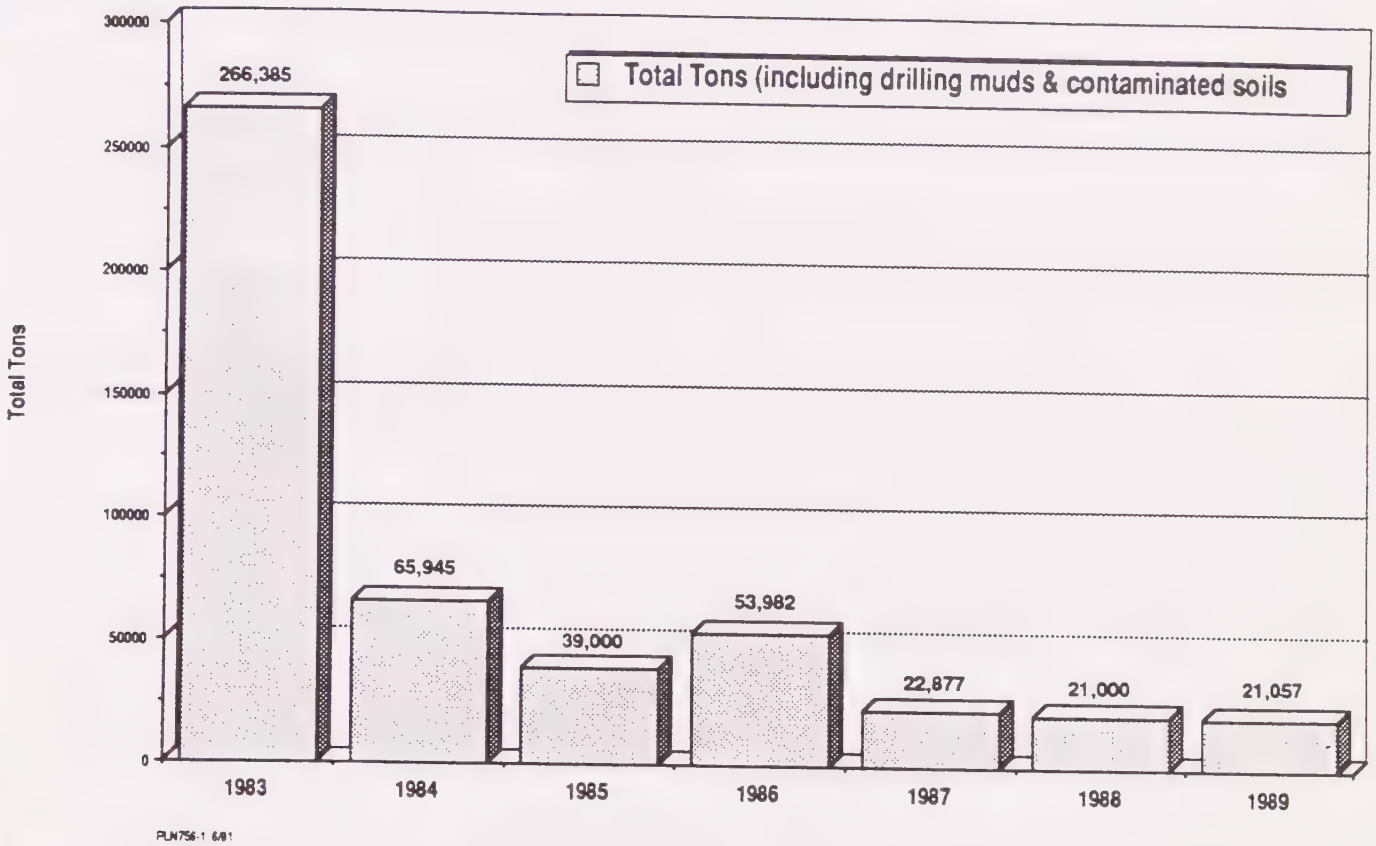
(Excluding contaminated soils)

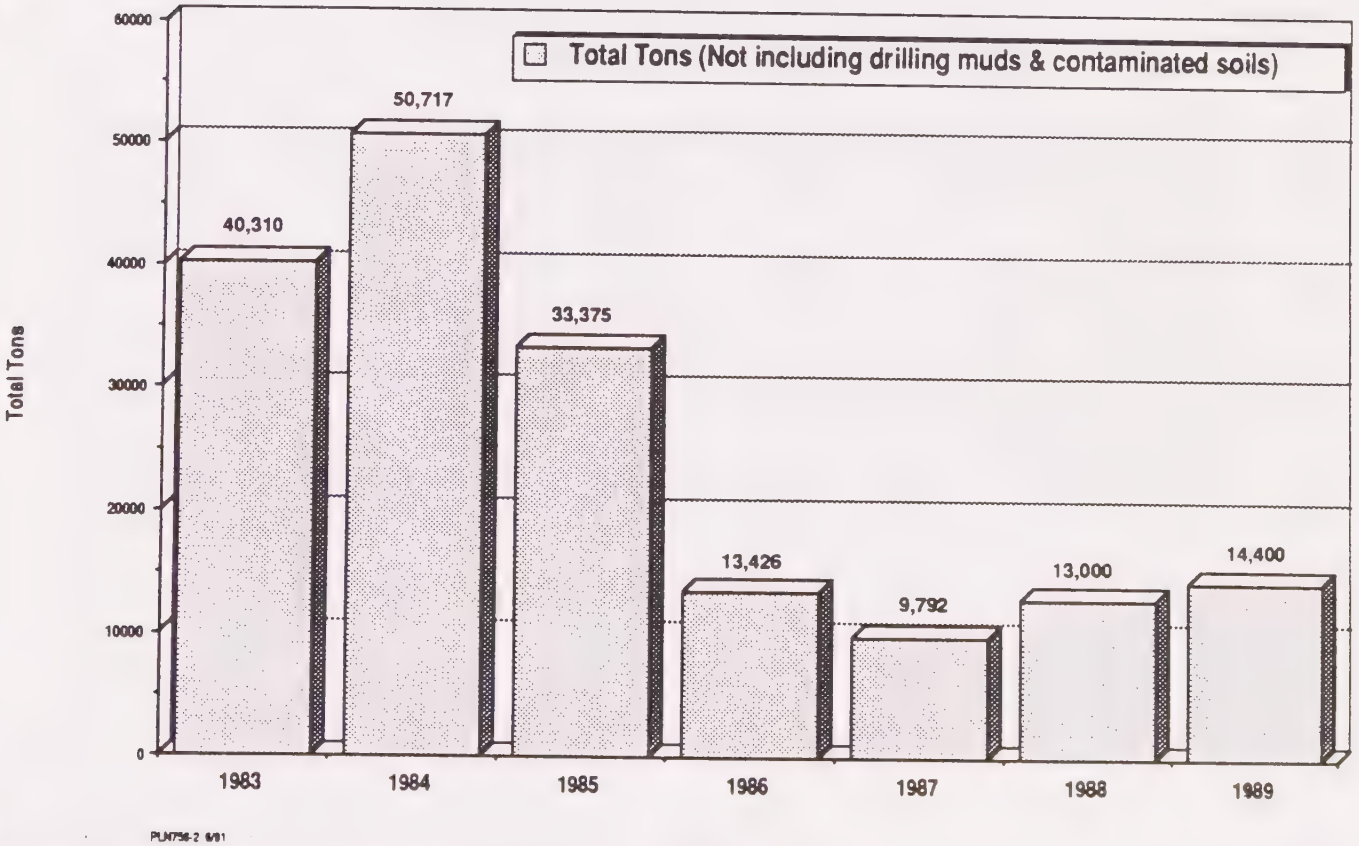
Source: *County of Ventura Environmental Health Department, June 1991*

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Figure 2.15.3

Ventura County Hazardous Waste: 1983-89





Source: *County of Ventura Environmental Health Department, June* 1991

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2.16 NOISE

2.16.1 INTRODUCTION

Noise has become an increasingly pervasive pollutant in the urban and suburban environment, owing largely to the increased mechanization of society and expanded transportation systems.

California Government Code Section 65302(f) requires the inclusion of a Noise Element in the General Plan of each City and County. The requirements of the Noise Element are as follows:

> "A noise element...shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for the following sources:
>
> 1. Highways and freeways.
>
> 2. Primary arterials and major local streets.
>
> 3. Passenger and freight on-line railroad operations and ground rapid transit systems.
>
> 4. Commercial, general aviation, heliport, helistop and military airport operations, aircraft overflights, jet engine test stands and all other ground facilities and maintenance functions related to airport operation.
>
> 5. Local industrial plants including, but not limited to, railroad classification yards.
>
> 6. Other ground stationary noise sources identified by local agencies as contributing to the community noise environment."

The State Code requires that existing and projected noise contours be determined for these sources, in minimum increments of 5 dB down to 65 dB(A), with Community Noise Equivalent Level (CNEL) as the currently preferred metric. For areas encompassing highly noise-sensitive activities, continuation of the contours down to 45 dB(A) is required. Because of the very large area encompassed within the County, noise contours have been presented in two forms. First, contours for all ground transportation sources have been calculated individually for existing and projected conditions and the results presented in tabular form. Second, the CNEL 60 contours have been calculated for projected conditions only and plotted on County Quad (1' = 2000') Maps. Details of the computational techniques, assumptions and limitations are discussed in a subsequent section. The tables and technical data for this section of the Hazards Appendix were compiled by Bruce Walker Consulting and Research in Acoustics.

The intents of this document are to:

1. Provide a general discussion of acoustics.

2. Review the current state of noise regulations and exposure criteria.

3. Present the findings of a Countywide noise survey and noise exposure calculation.

4. Discuss current and projected noise conflicts within the County.

5. Propose strategies for containment and/or alleviation of noise impacts within the County.

2.16.2 DEFINITIONS

The following is not intended as a comprehensive glossary of acoustic terminology, but will provide, in approximately logical order, information sufficient to allow a lay person to understand the technical language in the document.

Decibel (dB) - A unit division on a logarithmic scale whose base is the tenth root of ten, used to represent ratios of quantities proportional to power. In simple terms, if the power is multiplied by a factor of ten, then ten is added to the representation of the power on the decibel scale. If 0 dB represents 1 unit of power, 60 dB represents one million units, etc.

Sound Pressure Level (SPL - dB) - The ratio, in decibels, of the mean squared sound pressure to the square of the reference pressure, 20 micropascals.

A-weighted Sound Level (SLA - dB(A)) - Sound pressure level measured using the A-weighting network, a filter which discriminates against low and very high frequencies in a manner similar to the human hearing mechanism at moderate sound levels (ref. ANSI SI.4).

Time Average Sound Level (L_{eqT} - dB) - The level, in decibels, of the mean squared sound pressure averaged over time period T. This is often referred to as "equivalent sound level" and hence the "eq" subscript. The "equivalence" is to a sound of constant level which has the same total acoustic energy content.

Day-Night Average Noise Level (L_{dn} - dB(A)) - The long-term time average sound level, weighted as follows:

- Frequency response is filtered using the A-weighting network.
- Sounds occurring between 10 p.m. and 7 a.m. are weighted by 10 dB (in effect, the number of noise events is multiplied by 10).

Community Noise Equivalent Level (CNEL - dB(A)) - The long term time average sound level, weighted as follows:

- Frequency response is filtered using the A-weighting network.

- Sounds occurring between 7 p.m. and 10 p.m. are weighted by 5 dB (in effect, the number of noise events is multiplied by 3.15).

- Sounds occurring between 10 p.m. and 7 a.m. are weighted by 10 dB (in effect, the number of noise events is multiplied by 10).

Percentile Exceeded Sound Level (L_{PE} - dB) - The sound level (usually A-weighted) which is exceeded PE percent of a specified time period.

One-Third Octave Sound Pressure Level (dB) - The sound pressure level measured using a bandpass filter whose upper cutoff frequency is the cube root of two times the lower cutoff frequency, and which is identified by the nominal geometric center frequency of the pass band.

Sound Spectrum - The representation of an acoustic signal in terms of its level as a function of frequency. The most common method for determining the sound spectrum is with an analyzer consisting of a series or bank of contiguous one-third octave or octave filters and a bar-graph or numerical table display, known as a real-time analyzer.

Ambient Noise - The noise which results from the combination of all sources, near and far. The ambient noise level is expressed as L_{eqT} or CNEL as judged appropriate to the situation.

Background Noise - The steady noise level which characterizes a given environment in the absence of transient sources. The background noise is usually expressed as L_{90}, the noise level which is exceeded 90% of the specified time period.

Intrusive Noise - Noise from an identifiable source which causes a discernible change in the existing acoustic environment. Noises can be intrusive by virtue of excessive overall level, or as the result of unusual spectral or temporal characteristics.

Noise Contour - A line on a map which indicates locations of constant ambient sound level near or around known sources of noise. In practice, noise contours are often shown as calculated for the dominant source of noise only.

Sound Transmission Class (STC) - A single number rating of the noise-isolating capability of a building construction element (ref. ASTM E90, E336 and E413).

Attenuation (dB) - Reduction of sound intensity by any or all of the following mechanisms:

- Wave spreading losses - nominally 6 dB per doubling of distance from a point source or point source element in an array. For simple arrays, such as a line, the combined influence of the source elements is easily determined (3 dB per distance doubling for an infinite line, 0 dB for an infinite surface). For general arrays, no simple law applies unless the distance is very large compared to the source dimensions, in which case a point source approximation is usually adequate.

- Absorption - As sound passes through the atmosphere or over a (usually porous) surface, a small fraction of the sound energy is lost to internal molecular vibration and friction heating. The loss is expressed in dB per unit distance (e.g. dB per km or dB per 1,000 ft.). At large distances, this loss is usually more important than wave spreading losses.

- Reflection/Diffraction - A barrier or enclosure placed between sound source and reception points reflects acoustic energy away from the receiver. For an infinite barrier or enclosure, the loss is determined by the construction details of the barrier, usually primarily by its surface density. The loss provided by a finite barrier is determined by the extent of the barrier relative to the characteristic transmission distances, approximately in accordance with Fresnel diffraction theory.

- Refraction - Under thermal lapse conditions or when sources are downwind of receptors, the effective speed of sound decreases with altitude resulting in an upward bending of sound transmission paths and creation of a shadow zone near the ground. This can result in very high effective attenuation rates at distances of a few hundred feet or more. Atmospheric conditions which lead to shadow zone formation are more likely during the day than at night.

2.16.3 NOISE CHARACTERISTICS

Complex environmental sounds are described in terms of physical parameters, appropriately weighted combinations of which can be used to assess subjective perceptions or reactions.

Physically, sound consists of pressure disturbances which propagate through a medium. Any medium which is compressible and of finite density will support sound propagation. Sound propagates at a speed which is inversely proportional to the square root of the product of the density and compressibility of the medium. In air at room temperature, this speed is approximately 1,100 ft. per second.

On a most fundamental level, sound is described by:

Amplitude - the actual pressure or force per unit area of the sound. The amplitude of the faintest discernible sound is approximately 1/5,000,000,000 of a standard atmosphere (14.7 pounds per square inch), a tiny disturbance indeed! The standard reference pressure, which corresponds approximately to the minimum discernible sound pressure, is 20 micropascals. The amplitude of the highest reasonably tolerable sound is approximately 1 million times this minimum discernible value. The subjective manifestation of amplitude is loudness, but this is dependent upon other factors as well. The human ear acts as a signal compressor, with a factor of 3 in amplitude resulting in a factor of only 2 in perception of loudness.

Frequency - the rate at which the sound pressure fluctuates between values above and below the static pressure, in cycles per second. The unit Hertz (Hz) is defined as one cycle per second.

Subjectively, frequency defines pitch. One octave of pitch corresponds to a 2 to 1 ratio of frequencies, and "middle C" is approximately 256 Hz. The normal range of human hearing is nominally 20 Hz to 20,000 Hz, but, particularly at low frequencies, this is very dependent upon the amplitude of the sound.

Level - as discussed in the Definitions section, sound amplitudes are more conveniently described on a decibel scale. A pressure amplitude ratio of 10 corresponds to a level difference of 20 dB. By using 0 dB to represent an amplitude of 28.3 micropascals (20 micropascals rms), the range of normally encountered sound amplitudes covers the level range 0 to 120 dB.

Subjective parameters of loudness and pitch have been mentioned above. Pitch has been adequately addressed. Loudness is dependent upon amplitude and frequency in a complicated way. For simple sounds (consisting of one frequency at a time), the relationship is described by the Fletcher-Munson Curves, shown in Figure 2.16.1. Each of the curves defines a constant loudness line. It can be seen that at low frequencies and very high frequencies, the sound pressure level must be substantially higher for a given loudness level than at the frequency range 1,000-4,000 Hz or so. The shape of the curve at 40 phon (the phon is the unit of loudness level) is the approximate basis of the A-weighting network used for most environmental acoustic measurements.

Environmental sounds (or noises) are made up of many components, each with a different frequency and amplitude. It is necessary to be able to predict the level of the total signal. The correct method for summing any combination of uncorrelated signals is to add the squares of the amplitudes. This is done by dividing the sound levels by 10, summing the antilogs of the results, and then computing ten times the logarithm of the total. This is a simple procedure with a pocket calculator or a computer. Examples: 60 dB + 60 dB = 63 dB, 60 dB + 50 dB = 60.4 dB.

Description of a complex sound is in terms of level, spectrum and temporal signature.

Spectrum was discussed in the Definitions section. It describes the acoustic signal in terms of the relative concentrations of sound energy as a function of frequency. Noises in which energy is concentrated within a narrow frequency range tend to be more readily discerned and therefore potentially more annoying than sounds with a more uniform frequency distribution. On the other hand, broadband noises have a greater impact on speech communication.

The temporal signature relates how the noise level varies as a function of time. Three broad categories of temporal signature are described:

Steady - the noise level and spectrum remain approximately constant or vary slowly with a characteristic time of several minutes to several hours. Examples are distant traffic noise and air conditioner noise.

Intermittent - the noise level and/or spectrum fluctuates over a range of several dB with a characteristic time of several seconds to several minutes. Examples are aircraft flyover noise, nearby traffic noise and railroad train noise.

Impulsive - the noise has an abrupt onset and short duration. Isolated impulsive noises include explosions or chance heavy equipment impacts. Repetitive impulsive noise includes helicopter blade slap, railroad trucks passing over rail joints and impact wrenches.

2.16.4 NOISE EFFECTS

Noise can be annoying and physically harmful to human beings and to nonhuman animals. Human exposure to intense noise can result in irreversible hearing damage, and has been linked to other physiological effects including headaches, nausea, irritability, constriction of peripheral blood vessels, changes in heart and respiratory rates, nystagmus, changes in glandular and gastrointestinal activity, increased muscular tension and even vertigo. The effects of noise exposure in residential environments can include coughs, hoarseness, lesions and pain in the throat caused by the strain of shouting above the noise. Noise can also affect accuracy at work, and can act as a distracting stimulus. High noise levels have also been found to be linked to job-related accidents and absenteeism.

High levels of noise can have effects on animals that are similar to those on humans, in terms of tissue damage, changes in blood pressure and chemistry, and hormonal changes. Hatching failures (in birds) and other changes in reproductive processes have also been reported. Additional effects on wildlife can include panicking, disruption of breeding and nesting behavior, birth defects, changes in migratory patterns, and even changes in the size of bodily organs. A report by E. W. Shaw in 1950 indicated that adult condors an extremely endangered species, were very sensitive to noise and abandoned their nests when disturbed by blasting, sonic booms and even traffic noise. Noise can also mask animals' auditory signals and interfere with some animals' communication of necessary information, such as danger, distress, recognition of a mate or of young, and warnings about territorial boundaries. Adverse effects of noise on farm animals can include changes in milk production, incubation behavior, egg hatchability, mating behavior, and animal size and weight.

Noise can also have adverse effects on materials and structures, particularly as a result of sonic booms and related aircraft noises. These aircraft-generated noises can excite buildings to vibrate and can break windows and crack plaster.

Noise can also have adverse economic effects. A study by the City of Inglewood, for example, found that residential land values were 50 percent higher in areas where aircraft noise was below 80 PNdB, and that vacancy rates were 50 percent lower in such areas (R. Hurlburt, "Aircraft Noise Effects on Property Values," Department of Planning and Development, City of Inglewood, February 1972). In addition, schools have been forced to relocate, at considerable cost, because of aircraft noise. Damage from sonic booms can be costly to repair, whether paid for by individuals or by

insurance companies. The National Bureau of Standards reported in 1971 that industrial accidents caused by noise cost the nation $213 million in 1968.

2.16.5 NOISE CRITERIA, MEASUREMENT AND EVALUATION

Noise measurements must be taken in a manner which will allow the results to be evaluated in terms of appropriate noise exposure or emission criteria. The criteria are of two types: emission criteria and exposure criteria.

2.16.5.1 Noise Exposure Criteria

Commonly applied noise exposure criteria are based on an overall rating of the acoustical environment for land use compatibility purposes and on workplace noise levels for hearing conservation purposes. The workplace criteria are controlled by applicable Federal and State codes, and will not be discussed in this report. Land use compatibility criteria are most often used to assess the acceptability of land for residential, recreational and other noise sensitive uses, although some areas have adopted noise exposure limits for commercial activities as well. Some of the more commonly applied noise exposure criteria are listed below.

a. Federal

The U.S. Department of Housing and Urban Development has established the following criteria for residential land use acceptability (ref. 24 CFR Part 51):

L_{dn}	Classification
65 or below	Acceptable - no special requirements
65 - 75	Normally Unacceptable - special approvals, environmental review and 5 - 10 dB additional attenuation required
Above 75	Unacceptable - special approvals, environmental reviews and individually approved attenuation required

The Environmental Protection Agency has set noise exposure goals (not standards) which will result in freedom from hearing damage risk, reliable speech communication and a low annoyance potential. These are shown in the following table:

Effect	Level- dB(A)	Area
Hearing Loss	$L_{eq24H} < 70$	All areas

Outdoor Living	L_{dn} < 55	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	L_{eq24H} < 55	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor Living	L_{eq24H} < 45	Indoor residential areas.
	L_{eq24H} < 55	Other indoor areas with human activities such as schools, etc.

The Federal Highway Administration has established a matrix of land use compatibility for various uses relative to highway traffic noise. The following table presents FHWA criteria for the hourly time average sound level and the L_{10} for the peak traffic hour. These are levels to which noise from Federally funded highway construction projects must be limited. As an aid to the reader for comparison to other criteria, it may be noted that the peak hour L_{eq} and the CNEL are usually within approximately 1 dB of being equal.

Category	L_{eq1H}	L_{10}	Location	Description of Land
A	57	60	Exterior	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need, i.e., amphitheaters, parks and open space
B	67	70	Exterior	Picnic areas, recreation areas, playgrounds, active sport areas and pars not included in Category A and residences, schools, churches, libraries and hospitals
C	72	75	Exterior	Developed lands, properties or activities not included in the above categories

E	52	55	Interior	Residences, motels, hotels, public meeting rooms, churches, libraries, hospitals and auditoriums.

b. State

Title 24, T-25, Chapter 1, Subchapter 1, Article 4, Section 1092 of the California Administrative Code, "Noise Insulation Standards" places noise control requirements on multiple residence structures. The interior noise level in any habitable room, resulting from exterior sources, must be limited to CNEL 45 with doors and windows closed. If exterior noise exposure exceeds CNEL 60, an acoustical analysis is required demonstrating compliance. If windows and doors must be closed to meet the criterion, alternate ventilation or other means must be incorporated to provide an acceptable indoor environment. Detached single family residences are specifically exempted from this criterion.

California Administrative Code, Title 21, Public Works, Chapter 25, Division of Aeronautics, Subchapter 6, "Noise Standards," has established CNEL 65 as the land use compatibility criterion for residential, school and hospital uses relative to aircraft noise. The exception is high-rise apartment structures which are acoustically treated to achieve CNEL 45 or below indoors.

The California Office of Noise Control has provided a comprehensive land-use compatibility guideline in graphic form, presented in Figure 2.16.2. In most cases, overlapping ranges are provided to allow adaptation to specific community needs and characteristics. For residential sensitive uses, CNEL 60-65 is the suggested outdoor noise criterion and CNEL 45 is the mandated indoor noise criterion.

2.16.5.2 Noise Emission Criteria

State and Federal criteria apply to aircraft noise emissions and motor vehicle noise emissions. These regulations will not be reproduced in this report.

Local agencies are normally responsible for enacting and enforcing noise emission regulations for sources other than transportation-related. These sources include mechanical equipment, construction activities, industrial and commercial activities, etc.

Ventura County has already dealt with two such sources of noise: oil drilling/production and sand/gravel mining. Noise standards ranging from 40 to 60 dB(A) have been applied, depending upon time of day and location. The general concept of the sections is in accord with the latest thinking in the acoustical profession - measurement of time average sound level for a period of one hour - as opposed to some concepts based approximately on percentile exceeded noise levels.

Noise exposure regulatory criteria are concerned largely with controlling location of new residences in existing environments. More stringent subjective criteria may be applicable to the case of introducing noise sources into existing noise-sensitive areas. The following are the types of factors which bear consideration:

Temporary Noises - Noise impacts may be determined to be insignificant if their effects are for a limited period of time and reasonable care is exercised to minimize levels and annoying or harmful characteristics.

Unusual Spectral Content - Intruding noises which contain narrow band or "pure tone" spectral components which are clearly audible have a high subjective annoyance potential even if overall levels are within the normally acceptable range. As an objective measure of this, if the noise level in any one-third octave frequency band exceeds the arithmetic average of the level in the two adjacent bands by more than 5 dB, a +5 dB weighting is typically applied to the overall level for purposes of assessing impacts.

Unusual Temporal Characteristics - Impulsive or percussive noises will have an annoyance potential which exceeds that predicted by long-term average measures such as CNEL or L_{dn}. A +5 dB weighting is typically applied if such characteristics are "audible."

Substantial Increase in Background Level - If the intruding noise results in an increase of more than approximately 5 dB in the background noise level (L_{90}), a subjective awareness of a degradation in environmental quality is very likely. It is common to adopt an ambient base level, typically in the range 40 to 45 dB(A), or the prevailing level, whichever is higher. Continuous noise sources which cause this level to be exceeded by more than 5 dB are then judged as excessive.

2.16.5.3 Noise Measurement

For planning and zoning purposes, characterizing sound levels in terms of overall A-weighted time-averaged levels is appropriate. Measurements should be taken using an integrating sound level meter, capable of true linear averaging over periods of not less than 15 minutes, and preferably for periods of one hour.

For situations where both daytime and nighttime exposures are important and sleep interference or other residential impact is a consideration, CNEL is an appropriate descriptor. This can be calculated from hourly time-averaged levels using the 5 dB evening and 10 dB nighttime weighting factors, adding the levels using the decibel addition technique discussed above, and then subtracting 13.8 dB (the equivalent of dividing by 24 hours to take the average).

Situations where unusual spectral or temporal characteristics are an issue require measurement with spectrum analyzers, statistical distribution analyzers and impulse sound level meters. Field

measurements in support of this Noise Chapter were taken using a fully detailed measurement system, which will be documented in the Measurements section of the report.

2.16.5.4 Noise Evaluation

Various measurement and data interpretation schemes have emerged over the past two or three decades in an attempt to find the "perfect" predictor of subjective reaction to noise. Most of these involve detailed spectral and/or temporal analysis, and except in extreme cases are found to correlate only slightly better with subjective judgments than do overall A-weighted measurement levels.

For purposes of County noise enforcement and evaluation, codes should be based on the hourly time-averaged sound level or the CNEL, with a penalty factor of 5dB for severe spectral irregularities and/or impulsive temporal characteristics.

2.16.6 NOISE IN VENTURA COUNTY

Noise sources contributing to the acoustical environment in Ventura County are:

1. Motor vehicle traffic.

2. Aircraft, primarily from Camarillo Airport, Oxnard Airport, Point Mugu Naval Air Station, Santa Paula Airport and secondarily from overflights of aircraft from the Los Angeles International and Hollywood-Burbank Airports.

3. Railroad traffic, primarily from the Southern Pacific main line, secondarily from the Southern Pacific-Santa Paula spur line and the Ventura County Railroad.

4. Industrial operations, primarily gravel and sand quarries and oil drilling and production facilities.

5. Agricultural operations, including plowing and harvesting equipment, anti-frost fans, greenhouse heaters and irrigation pumps.

6. Miscellaneous sources, such as Rocketdyne test facility in Santa Susana Pass, shooting range in Holser Canyon.

Noise-sensitive uses in the County include:

1. Residences; sensitive both indoors and out for 24 hours per day.

2. Parks and other recreation areas; sensitive outdoors, primarily during the day.

3. Schools, churches and libraries; sensitive indoors during the day.

The objective of this section of the Noise Chapter is to determine, through calculations and reference to existing noise studies and measurements, noise levels resulting from the sources for existing and

year 2010 projected conditions, and to assess the impacts of those levels on the noise sensitive uses.

2.16.6.1 Scope of Community Noise Inventory

State General Plan Guidelines regarding noise elements specify that each local jurisdiction shall prepare a community noise exposure inventory that identifies the number of persons exposed to various levels of noise throughout the community. The guidelines suggest that this can be done by drawing noise contours around noise generators, and then tabulating the population census blocks within given noise contours. For the following reasons, Ventura County does not consider the preparation of such an inventory to be feasible or useful at this time.

First, due to the orientation of many of the census blocks in relation to roadways, the noise contour lines will not consistently follow the census block boundaries. Second, quantifying the number of people living within certain census blocks does not yield the number of people exposed to a given noise level; this would only be true if each person living in a given block spent all of his or her time on the property where he or she resides. On the contrary, out of every two households, three or more persons (on average) commute to employment out of the area where they live, some even commuting to jobs outside the County. School-age children in such households will, if course, be in school most of the day. Third, people exposed to high levels of noise by virtue of living near significant noise sources are generally aware of this fact and do not need a government entity to tell them so. Little benefit is to be gained by attempting precisely to quantify the noise levels; in any case, the State Guidelines themselves acknowledge that the accuracy of noise contours is usually no better than plus or minus 3dB, and that the accuracy of the noise exposure prediction decreases as the distance from the noise source increases (Noise Element Guidelines, Appendix B to State General Plan Guidelines, p. 12). Therefore, rather than prepare a community noise exposure inventory as called for in the State Guidelines, the authors of the Chapter have instead prepared a summary of noise-sensitive uses adjacent to significant noise sources. Readers who live, work, study or play in areas adjacent to significant noise generators may consult the noise contour maps if they wish to know the noise levels to which they are being exposed.

2.16.6.2 Calculation of Traffic Noise Contours

Noise levels for State Routes, County Roads and Future Roadways were computed using elements of the Federal Highway Administration, FHWA-RD-77-108 Traffic Noise Prediction Model. The model was used in conjunction with information provided by the Ventura County Transportation Department relative to present and projected traffic flows, truck mixtures and road configurations. The calculated noise contours are presented in two formats:

First, the noise contours were computed for each roadway segment individually, using the following simplifying assumptions:

(1) Noise emission levels are the functions of speed given in the FHWA model for Autos, Medium Trucks and Heavy Trucks, without corrections for grades, stop-go conditions, roadway curvature or road surface conditions. In most instances, these assumptions result in minimal error.

(2) No account is taken for the effects of landforms or existing structures on sound propagation. This will tend to result in an overprediction of levels, since terrain and structures generally act as shielding barriers. The reason for this simplification is that detailed mapping of sound fields in complex geometrical environs is very difficult and time-consuming, and would require a three-dimensional presentation to be meaningful. Such detailed computation is best done on a site-by-site basis.

(3) After visual inspection of the areas surrounding most of the roadways, the consultant opted to use the FHWA "Soft Site" propagation model. This model assumes that for acoustically absorptive ground conditions, as would characterize the agricultural lands flanking most of the roadways, losses are 4.5 dB per distance doubling. The alternative is the "Hard Site" model, which allows no consideration for ground or atmospheric absorption losses. Use of the "Soft Site" model helps compensate for potential effects of landforms and structures.

The results of the calculations are presented in the following tables, which list the assumed ADT and the computed noise contour locations relative to the center of the roadway for each segment considered. Space did not allow inclusion of truck mixture data on the tables. Cases where ADT and contour location trends appear to disagree result from disparate truck mixtures.

IMPORTANT NOTE: Computers and digital-readout measuring equipment have promoted a trend toward high-precision acoustic data reporting which is not justified based on the accuracy of prediction models and input data. For example, contour locations in the tables were computed using a root-finder routine with an acceptance error margin of 0.01 dB, while the accuracy specification on acoustic calibrators is only 0.3 dB and the scatter in the noise emission data used for the FHWA model is several dB. High-precision computations are desirable to provide an internally consistent set of output values. However, reporting of a contour at a distance of several thousand feet to the nearest foot is a computational artifact. Even under the most sterile conditions, the accuracy of the contour locations is no better than +/-10%. Under real conditions and at distances greater than a few hundred feet, the probability of measuring a CNEL within 1 dB of the predicted value would be very low. Hence, it is very important to recognize that the contours should be used as guidelines and general indications of trends only. Noise control designs should always be based on actual site data for any condition where the CNEL contour exceeds 65 dB.

The second computation was done to place noise exposure contours on a County map. Again, the FHWA emissions model was used, and effects of

landforms and structures ignored. However, a proprietary prediction algorithm was used. The algorithm breaks all roads up into 20 ft. long segments, each of which is treated as a point source, with 6 dB per distance doubling wave-spreading looses and 2.2 dB per 1000 ft. excess attenuation for atmospheric and ground plane absorption. This attenuation rate is based on "average" atmospheric conditions or 65°F, 50% relative humidity and the A-weighted traffic noise spectrum. The strength of the point source at each segment is computed from the FHWA emission levels, the speed of the traffic and the CNEL-weighted numbers of autos and trucks that pass per day.

For a single, straight road, results are comparable to those produced by the FHWA model. For the case of multiple roadways affecting a given area, contour shapes are correctly determined.

Since the scale of the County maps is quite small (1" = 2000'), it was determined that only the CNEL 60 contours would be plotted (for Highway 101, CNEL 70 is also plotted). A reduced map showing Countywide 2010 noise contours is included herein; see Figure 2.16.7. Greater detail is provided on the 2000' scale quad maps on file with the Ventura County Planning Division.

2.16.6.3 Existing Traffic Noise Environment

The unincorporated portions of Ventura County have relatively little urbanization. As a result of this, most roadways, including those with average daily traffic (ADT) levels over 3,000, are bordered by vacant lands or by areas with very low residential densities (e.g., one dwelling unit per five or more acres). Exceptions to this general finding are summarized in the table below, which serves as an inventory of the existing Countywide noise environment with regard to County roadways. The table uses a threshold of 3,000 + ADT as the criterion for noise generation.
SF = single-family; SFR = single-family residence.

ROADWAY SEGMENT	1986 ADT	ADJACENT NOISE-SENSITIVE USE	CNEL
El Roblar Dr. w/o Maricopa Hwy.	5,900	SFRs on both sides	60-63
La Luna Ave. s/o Lomita Dr.	3,400	SFRs north of Lomita Ave., at El Camino Corto and at Oakwood Street	62-65
Lomita Ave. e/o Tico Rd.	3,490	SFRs near junction at El Roblar Drive; elementary school	56-59
State Route 33 north of Casitas Vista Rd. to S.R. 150	16,200-22,000	SFRs in Casitas Springs community; Oak View library; small pockets of single-family development between Santa Ana Blvd. and Encino Dr.; 2 mobilehome parks just south of S.R. 150 (west side).	68-71

S.R. 33 south of Canada Larga Rd.	23,500	Small single-family community on east side, between E. Bounds Rd. and Spring St.	60-68
S.R. 101 between city limits of San Buenaventura and Santa Barbara County Line, including railroad line running parallel	51,000	Small single-family and two-family beach communities at Solimar Beach, Sea Cliff, Mussel Shoals and La Conchita	68-73
Ventura Ave. between McKee St. and Bard Lane	6,330	Small single-family community	64-66
Central Ave. between Rose Ave. and Vineyard Ave.	4,240	Rio Mesa High School	61-63
S.R. 1, south coast, near Los Angeles County Line	13,200	Single- and multi-family development	59-70
S.R. 1, between Wood Rd. and Las Posas Rd.	12,000	NAS Point Mugu base housing	62-64
S.R. 34, Somis	6,000-7,000	Library; small SF cluster on west side	64-66
Santa Rosa Rd. between Camarillo and Thousand Oaks	Approx. 5,800	Small pockets of SF development at Yucca Dr., Holiday Pines Lane, Charisma Court and Pradera Lane	55-65
Wendy Dr., Newbury Park area	12,890	Single-family development on both sides	65-70
Camino dos Rios, west of Lynn Rd.	4,880	Single-family development on both sides	60-65
Kanan Rd., north of Los Angeles County Line	Approx. 6,000	Single-family development on both sides; Mae Boyer Park; library; schools	65-68
Lewis Rd. west of Cawelti Rd.	6,470	Ventura County Assn. for the Retarded	60
Valley Vista Dr. north of Crestview Ave.	6,190	Single-family development	60-65

It can be seen from this table that the largest number of potential conflicts exist along State Route 33 between the city limits of San Buenaventura and the intersection with S.R. 150; there are several residential enclaves, as well as a library, along this route, and traffic volumes are fairly high. Other potential problem areas are the coastal communities bordering S.R. 101 (the Ventura Freeway) and S. R. 1, the base housing adjacent to S.R. 1, and the residential area around Wendy Drive.

2.16.6.4 Railroad Noise

Railroad noise is characterized by infrequent periods of noise levels which exceed the normal ambient noise level by several to several tens of decibels, with typical durations ranging from 30 to 150 seconds. The actual noise level depends upon a number of factors:

(1) Distance from the tracks. Typically the average noise level drops off at a 3 to 4 dB per distance doubling rate. The peak noise level drops off at a 3 to 4 dB per distance doubling rate. The peak noise level, which results from concentrated sources, drops off at 6dB per distance doubling rate. At a distance of 50 ft., typical levels for "cruise speed" trains are 90-100 dB(A) for peak engine noise, 80-85 dB(A) for car wheel noise and 100-115 dB(A) for crossing horns.

(2) Speed of the train. Rail car noise is approximately proportional to the cube of the speed (doubling the speed increases the noise level 9 dB).

(3) Number of locomotives and cars. Individual train noise is most conveniently expressed in terms of peak noise and Sound Exposure Level (SEL). The SEL for a noise event of duration T seconds is equal to the L_{eqT} plus 10 lot(T). It is approximately directly proportional to the number of cars and locomotives (doubling the number of cars and locomotives increases the SEL by 3dB). The CNEL, L_{dn}, L_{eq}, etc., can be computed directly from the SEL and the weighted average number of trains.

(4) Condition of the tracks. Welded rail reduces noise levels an average of 7dB relative to jointed rail, and also reduces induced ground vibration.

(5) Crossing horn in operation or not.

[ref. C. Harris (ed.) Handbook of Noise Control, 2nd Edition, R. Lotz & L. Kurzwell, "Rail Transportation Noise," pp. 33-1 - 33-6].

Both the Southern Pacific and Ventura County Railroads affect portions of the County. Many years of experience measuring trains in Ventura County have resulted in the following average values for SEL for the various types of trains at a 50 ft. reference distance:

Main Line SPRR Freight	109 dB SEL
Amtrak Passenger Train	107
Santa Paula Spur and VCRR	101-105

Amtrak runs two passenger trains per day on the main line, both during daytime hours. Main line freight trains run on a quasi-random schedule, with no fixed number or time on any given day. On average, there are approximately 10 freight trains per day. On the Santa Paula Spur and the Ventura County Railroad, there are an average of two small freight trains per day, usually during daytime hours.

CNEL and L_{eq24H} noise level contours were computed for the main line. (L_{eq24H} is of interest because it illustrates, by comparison, the severe nighttime weighting imposed by CNEL. This weighting is of questionable validity for assessing noise levels in outdoor living spaces). For the smaller lines, daytime-only operation results in CNEL and L_{eq24H} being identical.

Distance in Feet to Train Noise Contour from Centerline of Tracks

Noise Level	Main CNEL	Main L_{eq24H}	Spur Line
45	3,400	2,020	410
50	2,210	1,230	170
55	1,380	680	65
60	770	310	26
65	370	130	10
70	155	50	4
75	60	20	2

As was the case for the highway noise contours, these are generalizations. Detailed site analyses for specific locations could demonstrate levels which differ from these by several dB.

2.16.6.5 Aircraft Noise

For Oxnard and Camarillo Airports, PRC Engineering completed ANLUC Studies in 1983 which produced CNEL contour maps for a variety of airport development options. The Long-Range Forecast contour maps from both studies are reproduced on Figures 2.16.3 and 2.16.4. Portions of the contours which lie in unincorporated County territory have been highlighted. The 1976 AICUZ study for Point Mugu Naval Air Station produced CNEL contours for that facility, reproduced in Figure 2.16.5, most of which lie in unincorporated County territory. The contours have been reproduced on maps at 1" = 2000' scale.

County areas impacted by noise levels in excess of CNEL 60 from Camarillo and Oxnard Airports are currently occupied by agricultural uses. The NAS noise impact zones encompass on-base activities including housing, and low density residential and commercial uses along eastern Hueneme Road and Lewis Road. Camarillo State Hospital is exposed to approximately CNEL 50.

Outdoor recreational areas in the form of private duck hunting clubs are located immediately to the northwest of the main runway, in the CNEL 70-75 zone. An interview with one club member indicated that although the noise was unnerving the first two or three times he visited, he became rapidly acclimated.

Touch-and-go operations occur at Santa Paula Airport on weekdays, with aircraft circling the airport to the southeast, affecting low-density residences along South Mountain Road. The 1974 County Noise Element presented CNEL 55 and 65 noise contours for Santa Paula

Airport which have been reproduced on Figure 2.16.6 and on 1" = 2000' scale maps. These indicate that the CNEL 55, and therefore the CNEL 60 contour, are essentially contained within the Santa Paula City Limits. Measurements of noise levels outside the city are included in the Measurements section of the report.

2.16.6.6 Industrial Noise Sources - Major industrial noise sources have been identified as follows:

(1) Concrete Express Batch Plant on Ventura Avenue. Noise exposure is to residences on Norway Drive on the opposite side of Highway 33, which acts as a noise barrier. The plant operates from 6:00 a.m. until approximately 2:00 p.m. Noise levels were measured at a distance of 150 feet in front of the plant and in the potentially affected community. At the nearby position, the typical noise level during truck loading was 73 dB(A). The background noise level in the residential community was increased from approximately 46 dB(A) to approximately 51 dB(A) when the plant was started at 6:00 a.m. However, the ambient noise was dominated by traffic on Highway 33. One resident was interviewed, and stated that noise from the plant was not noticeable due to the high traffic noise. Approximate noise contours for the plant are included on the 1" = 2000' scale maps. The CNEL would be 1.5 dB lower due to the limited hours of operation.

(2) Petrochem facility on the west side of Highway 33. This facility is currently not fully active. No audible noise impact was found in investigations at the nearest residential uses, located on the east side of Ventura Avenue at a distance of over 1000 ft.

(3) Pepsi Cola and oil supply facilities on Ventura Avenue near Bard Lane. The primary impact from the Pepsi Cola Facility (and numerous unspecified other industrial facilities on Ventura Avenue) is from delivery trucks. These are included in the traffic noise calculations. At the oil supply yard off the end of Bard Lane, numerous pipe storage racks were noted, but no activities were observed. It is probable that residences on the east side of Ventura Avenue are exposed to impulsive noises when pipe is loaded or off-loaded at the facility.

(4) Rock plants, sand and gravel mine, concrete batch plant and General Foods processing plant on the northwest side of Vineyard Avenue at the Santa Clara River. Primary noise impact is on residences at the east corner of Vineyard and Central Avenues. The General Foods facility appears to operate 24 hours per day. It produces a noise level of 41 dB(A) at the residences and school at the north end of Joan Road.

(5) Sand/gravel mine and batch plant at end of Bixby Road. The facility operates between 6:30 a.m. and 3:30 p.m., and is remotely located in rough terrain. The principal impact is from truck noise in Balcom Canyon and Bradley Roads. This affects low-density residences, and is included in the noise contour calculations.

(6) Sand/gravel mine and batch plant at end of Happy Camp Road. The facility operates between 6:30 a.m. and 3:30 p.m., and is remotely located in rough terrain. The principal impact is from truck noise on Walnut Canyon, Broadway and Happy Camp Road. Truck traffic is determined to be approximately one truck per minute during the 6 a.m. to 7 a.m. and 11 a.m. to noon hours. This affects low-density residences. A brief interview with a resident from the north end of Walnut Canyon indicated no strong reaction to the frequent truck passage noise.

(7) Rock and Batch Plants at End of Tapo Canyon Road. Near its northern terminus, Tapo Canyon splits into two branches. The western branch is Bennett Road, at the north end of which is a large complex, including san and gravel quarries and concrete batch plants. The eastern branch remains Tapo Canyon Road and leads up to Gillibrand Canyon, which also houses a sand and gravel supply operation.

Noise-sensitive uses potentially affected by the industrial facilities and more vehicles which service them are:

a. Two residences at the Big Sky Ranch on Bennett Road, one of which is located approximately 50 feet from the roadway and one of which is located approximately 150 feet from the roadway.

b. A group of residences located near the entrance to the facilities at the end of Tapo Canyon Road. Setbacks range from approximately 70 to several hundred feet.

c. Scattered residences and mobilehomes along Tapo Canyon Road south of the branch. Setbacks are several hundred feet.

The industrial facilities are located behind hills at a distance of 3000-4000 feet from the residences. A-weighted acoustic measurements were taken at several locations in the area, selected on the basis of apparent closest to line-of-sight transmission from the facility. In the absence of nearby traffic noises, these measurements showed background noise levels in the range 31 to 38 dB(A). At a point near the Big Sky Ranch, the measured background noise level was 38 dB(A), and mechanical noises from the direction of the Bennett Road industrial facility were faintly audible. At the other locations, there was no subjective awareness of the industrial activities.

Motor vehicle traffic associated with the facilities begins at approximately 5:30 - 6:00 a.m., with workers and truck drivers arriving via Tapo Canyon and Bennett Roads. Beginning at 6:15 a.m., double trailer dump trucks and ready-mix concrete trucks arrive in and exit the area at a rate of approximately one every four minutes at the Bennett Road facility and approximately one every ten minutes at the Tapo Canyon Facility, with operations ceasing approximately 3:00 p.m. Because of the narrow, winding roads to both facilities, the vehicle speeds are slow, estimated at 25-30 mph.

Early morning noise measurements were taken at the Big Sky Ranch area at a distance of 50 feet from the center of Bennett Road, representing the noise exposure at the nearest of the residences. The results, for a one-hour sample taken between 6:00 and 7:00 a.m., were Leq 63, Lmin 30 and Lmax 87 dB(A). The CNEL corresponding to the measured levels is 60 dB(A), based on exposure for one "nighttime" hour and 8 daytime hours, weekdays only. This would be a marginally significant noise impact with a CNEL 60 community noise criterion, insignificant with a CNEL 65 criterion. Peak noise levels from individual truck passings will result in temporary interference with communication and possible early awakening, although no evidence of this was observed during the measurements.

2.16.6.7 Agricultural Noise Sources

Three basic types of noise sources have been identified as associated with agricultural activities in the County. These are (in addition to pickup and delivery truck noise, which is included with the transportation noise analysis):

(1) Cultivation and harvesting equipment

(2) Irrigation and domestic water pumps

(3) Anti-frost equipment (wind generators)

In most instances, noise from these sources affects primarily the producers of the noise, i.e., the farmers on whose land the equipment is operating. Occasionally, however, the cultivation/harvesting equipment will be operating on portions of farms near property lines and will therefore have a potential noise impact on neighbors. Several instances have been observed where large irrigation pumps are located near property boundaries, in some cases within 100 or 200 feet of residences. Wind machines are located atop tall towers, and, depending on the type of machine, can produce noise which is audible for several thousands of feet.

(1) Cultivation/Harvesting Equipment:

Tractors and similar mechanized equipment of size used on Ventura County sized farms will produce noise levels in the range 75-85 dB(A) at a distance of 50 feet. Therefore, equipment which produces noise near the upper end of this range will cause some degree of interference with communication at distances of approximately 350 feet. Since the equipment is expected to be operating within this distance of neighbors for only a small fraction of the time, the noise impact would generally be temporary and insignificant. However, cases could occur wherein equipment was used in an unusually loud manner or repeatedly in a specific area which was near to a neighbor. These cases could produce significant noise impacts and should be covered by the Noise Ordinance.

Operating procedures and equipment maintenance are the best practical means of minimizing this noise impact.

(2) Water Pumps:

Water pumps generally produce a high-pitched whine and overall noise levels in the range 50 to 65 dB(A) at 50 feet, depending upon the size of the pump. At a distance of 100 feet, a proximity within which adjacent residences have been observed, CNEL 65 could be produced by a large continuously operating pump. This would be a significant noise impact, as well as an annoying condition, due to the tonal character of the noise. These noise impacts should be covered by Mechanical Equipment Noise sections of the Noise Ordinance.

Control of the noise could be accomplished readily by erecting a lightweight impervious barrier around the side(s) of the pump that will block line-of-sight noise transmission to noise-sensitive receptors. This would not need to include more than three sides of the pump, so that ventilation would not be impeded.

(3) Wind Machines:

Agricultural wind machines are typically two-blade propeller fans atop a tubular or lattice tower, which are driven by one of three methods:

a. An electric motor atop the tower;

b. A gasoline, diesel or propane engine mounted in an enclosure at the bottom of the tower, with a drive shaft in the tower;

c. A gasoline, diesel or propane engine mounted in an enclosure at the top of the tower.

(A rarely encountered fourth approach is a propeller driven by small ram jets at the blade tips).

Noise levels produced are a function of the type of drive system employed, the size of the blade, the tip design of the blades, the rotating speed, and the operating condition of the unit. A well designed fan, with subsonic tip velocity and for which the blade noise is dominant, would produce noise levels in the range 75-80 dB(A) at 100 feet slant distance. Machines with supersonic tip speeds and/or poorly muffled internal combustion engine (or ramjet) drives could produce levels 10 to 20 dB in excess of this.

Wind machines are typically used only when temperatures drop below freezing by several degrees. This is only a few days per year. However, the infrequency of use can amplify the subjective impact on the unacclimated receptor. A study group

consisting of interested parties (ranchers, residents, technical advisors) should be formed to develop a section in the Noise Ordinance which will promote the use of minimum noise machines and proper equipment maintenance.

2.16.6.8 Miscellaneous Noise Sources

(1) Rocketdyne test facility in Santa Susana Pass. During periods of regular testing, rocket engines are run for periods ranging from 2 to 200 seconds, at intervals of approximately 3 days. As of 11/15/87, it has not been possible to coordinate measurements with uses of the facility. Reports from residents in the area indicate that the noise is typically clearly audible and broadband in character. The nearest residences are located approximately 2 miles over hilly, wooden terrain from the testing area, which will result in substantial attenuation of high frequency components of the rocket noise. This makes A-weighted noise level a poor measure of the effects of the noise, since the low frequency components may result in some minor structural shaking.

(2) Shooting Range in Holser Canyon. The facility is open during daytime hours only, Tuesdays through Sundays. The target ranges are separated from the surrounding area by hills, which block line of sight sound transmission. There is one off-site residence located to the south of the range at a distance of approximately 3000 ft. from the nearest target range area.

Acoustic measurements were taken at a distance of approximately 100 ft. from the residence, in the direction of the range, while several of the target ranges were in use, including large caliber pistol shooting at the range nearest the residence. Results of the measurements are included with the figures and in the Summary table. The background noise level in the area is very low, approximately 30-35 dB(A), so that any intrusive noise will have a high probability of being audible. Over the course of a 15-minute measurement sample, audible gunshots were noted with maximum sound levels (using the rms-fast detector of the analyzer) as shown in the table:

Maximum Sound Level	Number of Shots
45-50	18
50-55	13
55-60	4
60-65	1

Also during the 15-minute measurement, five aircraft (two jet airliners and three propeller-driven private planes) flew over the test area. Peak levels ranged from 50 to 63 dB(A) and durations ranged from of 20 to 80 seconds, for a total SEL of approximately 72 dB(A). [Note that SEL represents the product of sound intensity and time duration, and is therefore not a sound level in the usual sense]. By contrast, the gunshot

durations are a tenth of a second or less, for a total SEL of 59 dBA(A). Therefore, the aircraft noise contributes approximately 20 times as much to the overall acoustic environment than does the gunshot noise.

A brief interview with the residents indicated that the noise from the Shooting Range was sometimes audible but not annoying.

Our conclusion regarding this source is that although it produces noise which is clearly audible at the nearest residential use, the noise is produced during daytime hours only and is substantially less significant than noise from other transient environmental sources.

(3) Surf noise. Residences along Highway 1 are exposed to a combination of traffic and surf noise. On an average surf level day, noise at a distance equivalent to that of residences ranged from 45 to 6t dB(A). Traffic noise peaks were well above 70 dB(A).

2.16.7 ACOUSTIC MEASUREMENTS

The environment within Ventura County ranges from wilderness to heavy industrial zones. A noise measurement program has been undertaken to sample the acoustical properties of this variety of environs.

2.16.7.1 Measurement Procedure

All field measurements were taken using a Larson-Davis Laboratories type 3100A precision integrating 1/3-octave real time analyzer. This instrument was used in conjunction with a portable computer to perform the following concurrent functions:

(1) Compute the time-averaged (L_{eq}) 1/3-octave spectrum and overall noise levels (A-weighted, C-weighted and unweighted) for a 15-minute continuous measurement sample.

(2) Sample the A-weighted sound level ten times per second and store the samples on magnetic disks.

(3) Following the measurement, plot the A-weighted level-versus-time and the cumulative statistical distribution of the data.

2.16.7.2 Measurement Results

The plots of time histories and cumulative statistical distributions are appended to the report. The A-weighted L_{eq} is the primary datum of interest, and the maximum and background levels are of secondary interest. These are summarized in the following table:

Position #	Daytime			Nighttime		
	L_{eq}	L90	L1	L_{eq}	L90	L1
1	--	--	--	67	57	77
2	72	53	82	66	50	79
3	--	--	--	47	31	60
4	63	50	76	54	41	68
5	60	40	70	--	--	--
6	51	39	62	44	43	46
7	--	--	--	46	41	54
8	69	46	80	69	43	79
9	--	--	--	56	49	64
10	--	--	--	73	70	79
11	66	57	70	--	--	--
12	61	40	73	--	--	--
13	71	63	82	65	59	71

Position

(1) Highway 1 at Yerba Buena - Surf and highway traffic

(2) Highway 118 at North Street - Heavy trucks

(3) Santa Rosa Road at Yucca Street - Sporadic traffic

(4) Ventura Avenue at Bard Lane - Local and Highway 33 traffic, crickets at night

(5) North end of Walnut Canyon - Sand, gravel and cement trucks

(6) Villanova Road at Loma Street - Crickets at night, local traffic daytime

(7) North end Joan Street - General Foods plant, trucks on Vineyard

(8) Walnut Canyon and Broadway intersection - Heavy trucks

(9) Norway Drive at Garland Street - Highway 33 traffic, concrete batch plant

(10) Ventura Avenue at batch plant - Batch plant noise and heavy delivery trucks

(11) Highway 126 west of Wells Road - Auto and truck traffic

(12) South Mountain Road at Santa Paula Airport - Local auto traffic, glider tow aircraft

(13) La Conchita neighborhood, corner of Surfside Street and Bakersfield Avenue. Traffic on Highway 101, short freight train, occasional local traffic

2.16.8 NOISE IMPACTS

Areas of concentrated noise sensitive uses have been identified by the County Planning Division. Based on the measurements and computations, noise levels at these locations have been tabulated together with existing and year 2010 projected noise levels.

The existing traffic noise environment is discussed above in Sec. 2.16.6.3.

Increases in noise levels between the present and the year 2010 will be caused primarily by increases in traffic levels. Figure 2.16.8 provides a complete inventory of 2010 noise contours for all County roadways that will exceed 3000 ADT (the level beyond which noise is likely to be a problem) in 2010. These tables were used in conjunction with land use designations of the Area Plans and "existing communities" to identify 2010 traffic noise, based on the assumption that noise-sensitive uses are most likely to be located in one of these two types of geographical areas. The results of this analysis are presented in the table below (see Figure 2.16.7 for a diagrammatic representation of the 2010 Noise Contours).

In terms of existing development, the table shows that the greatest number of noise-sensitive uses will be impacted by growth in traffic levels along Wendy Drive, Ventura Avenue (Holt Street area), Camino Dos Rios, and Santa Ana Road (at Burnham Road); but the actual number of dwellings affected is relatively small (fewer than 100).

The roadway segments listed in the table below are adjacent to existing communities that are developed to urban and rural densities. The table summarizes the impacts of the 2010 noise contours (as calculated by the County's noise consultant) on such existing development. The noise-sensitive uses in the right-hand column can be expected to experience higher noise levels (e.g. from 55-60 dB to +/-65 dB).

ROADWAY SEGMENT	2010 ADT	USES IMPACTED	CNEL RANGE
Kanan Rd., N of County Line	20,000	Numerous home on both sides of road for 5 or 6 blocks along the road	66-78
La Luna Ave., S of Lomita Ave.	5,000	Approx. 10 homes on La Luna Ave.	56-66
Santa Ana Rd. at Santa Ana Blvd.	4,000	8 or 9 mobilehomes at corner of Santa Ana and Burnham Roads	60-65
Main St., Piru, N of Camulos St.	4,000	Residences along both sides of Main St.	62-64

Wendy Drive S of US 101	16,000	Numerous SF dwellings on both sides of Wendy Dr.	55-70
Telegraph Rd., West Santa Paula Community	5,000	2 or 3 SF dwellings on Telegraph Rd.	64-66
Lewis Rd., Somis, btwn. North and Rice Streets	17,000	Approx. 10 dwellings on both sides of Lewis Rd.	67-69
Ventura Ave., Holt St. area	8,000	Approx. a dozen homes on sides of Ventura Ave.	65-67
Camino Dos Rios	9,000	Several homes on both sides of road	63-68
US 101 at Lynn Ranch Community	161,000	Several homes on Calle Arroyo	67-69
Santa Susana Pass Rd. at Clear Spring Rd. (S side)	9,000	3 homes	66-70
Rt. 33, near Holt St. area	40,000	Mobilehomes on east side	65-74
Rt. 33 north of Casitas Vista Rd., to Rt. 150	24,000	Homes in Casitas Springs and btwn. Santa Ana Blvd. and Encino Dr.; Oak View Library; mobilehomes on west side just south of Rt. 150	70-73
Rt. 33 south of Canada Larga Rd.	40,000	Homes on west side of Norway Dr.	62-70
US 101 btwn. city limits of Buenaventura and Santa Barbara County Line	102,000	Small single-family and communities at Solimar Beach, Sea Cliff, Mussel Shoals and La Conchita	71-76
Central Ave. btwn. Rose Ave. and Vineyard Ave.	7,000	Rio Mesa High School; several homes on northeast side, just south of Vineyard	63-68
Rt. 1, south coast, near Los Angeles County Line	20,000	Single-family and multi-family development	61-72
Rt. 1 btwn. Wood Rd. and Las Posas Rd.	12,000	NAS Point Mugu base housing	62-64
Santa Rosa Rd. E. of Yucca Dr.	11,000	Small pockets of single-development at Yucca Dr., Holiday Pines Land, Charisma Court and Pradera Lane	56-66

Santa Clara Ave. S. of Friedrich	13,000	Several homes on east side, south of Friedrich	66-68
Rose Ave. north of US 101	8,000	Several homes on west side; junior high school on east side	61-66
Vineyard Ave. north of US 101	35,000	4 to 5 homes on east side in El Rio area	69-71
Victoria Ave., just north of US 101	70,000	Several homes on east side	75-80

The following roadway segments will tend to become noisier as 2010 approaches. The segments have vacant lands adjacent to them that could develop at urban or rural densities pursuant to adopted plants and/or zoning. Future development in these areas should take account of the highway noise. Noise-sensitive uses should be set back beyond the 65dB contour line, or incorporate sound-attenuating measures such as masonry walls, earth berms, and the like.

a. La Luna Ave., south of Lomita Avenue (zoning: R-E, R-E-20, R-E-1Ac, R-E-2Ac).

b. Main Street, Piru; east side, south of railroad (R-P-D-6U).

c. The eastern portion of Santa Rosa Road (designated Rural).

d. The Somis area, near the junction of Lewis Road and Highway 118 (designated Rural).

e. Kanan Road, east of Thousand Oaks city limits. Note, however, that plans already submitted for this area incorporate sound-attenuating measures such as earth berms, masonry walls and increased building setbacks.

In addition, several new highway links have been proposed for the County. Noise contours have been estimated for these links for the year 2010, and these estimates are presented in tabular form in Figure 2.16.9. Figure 2.16.10 consists of a series of graphs that summarize noise measurements taken at specific sites throughout the County.

2.16.9 MITIGATION STRATEGIES

The following strategies may be used individually or collectively to mitigate noise impacts, and to minimize the number of people exposed to high levels of noise.

1. Maximize separation of industrial and residential uses.

2. Maximize separation of residential uses and truck routes.

3. Restrict trucking hours through existing residential areas.

4. Minimize stop signs and signals along truck routes through residential areas, but enforce a speed limit of 35-40 mph in such areas (motor vehicle noise is a strong function of speed).

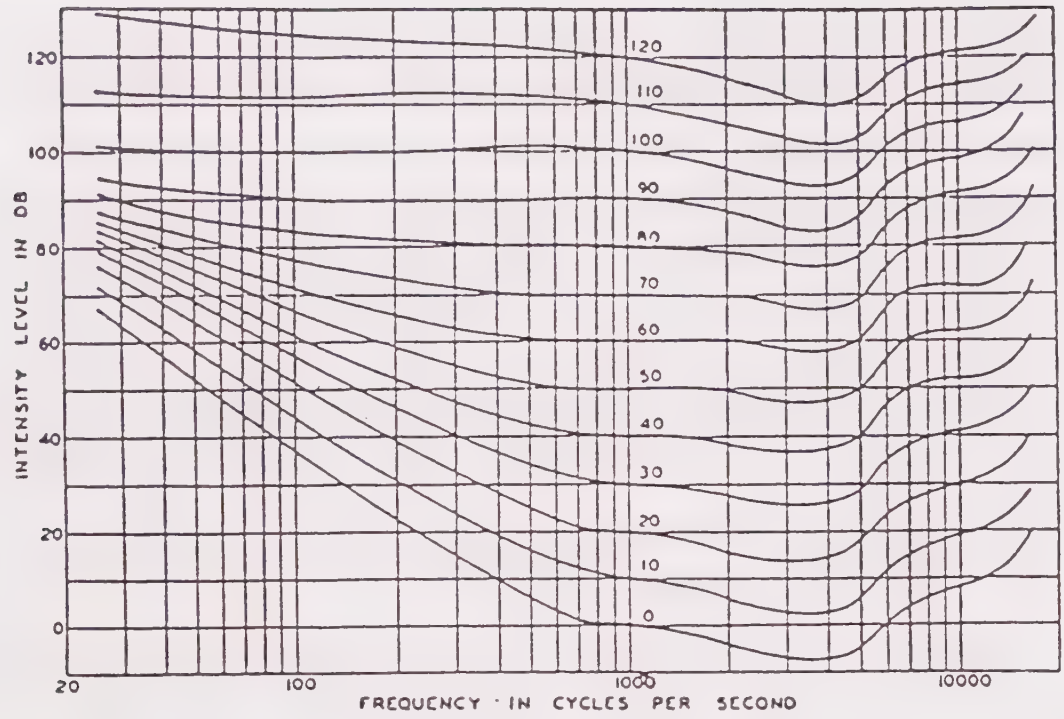
5. Lobby for enforcement of vehicle noise emission codes.

6. Restrict operation of industrial facilities to hours which are compatible with sleep patterns of nearby residential areas. Although 7 a.m. is the "official" end of nighttime, the observation from the measurement trips is that most people in areas near industrial uses are awake by 6:00 or 6:30 a.m.

7. Establish a County Noise Ordinance, limiting intrusive noise levels (L_{eq1H}) at noise-sensitive uses to the ambient level (or ambient base level) plus 3 to 5 dB. The ambient base levels should be determined by the Board of Supervisors, with recommendations from Planning Staff and their consultants.

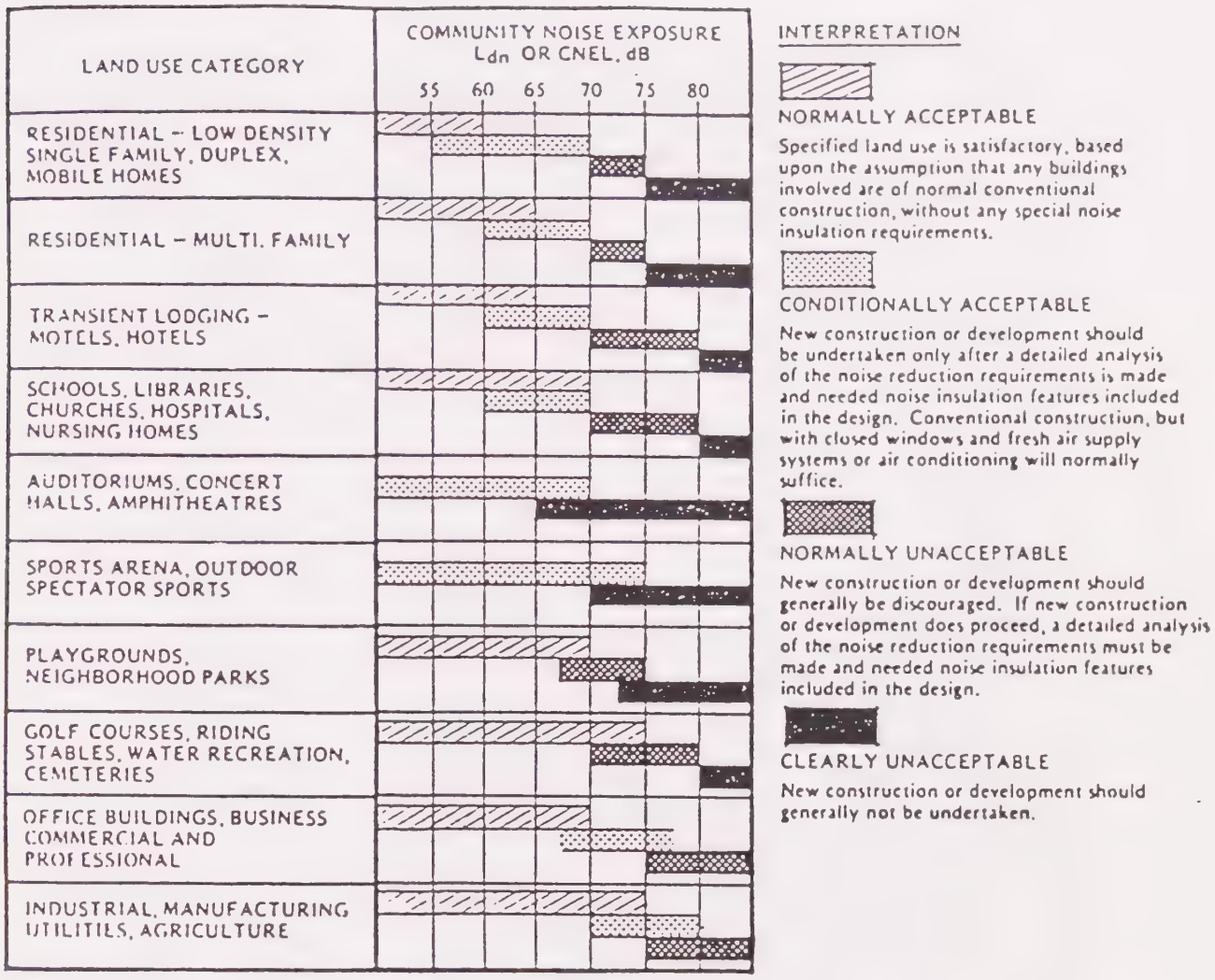
8. Adopt a County Noise Exposure Ordinance, requiring mitigation of outdoor living space noise to L_{eq24H} 60 or 65 and indoor living space noise to CNEL 45 in new residential construction.

9. Require that an acoustical site analysis and noise control specification be undertaken for noise-sensitive projects located within the CNEL 60 or 65 contour of any roadway, railroad, airport or industrial use as identified in this or subsequent studies.



Contour lines of equal loudness for normal ears. Numbers on curves indicate loudness level. 0 db = 10^{-16} watts per square centimeter. 0 db = 0.000204 dyne per square centimeter. (After Fletcher and Munson.)

Figure 2.16.1



CONSIDERATIONS IN DETERMINATION OF NOISE–COMPATIBLE LAND USE

A. NORMALIZED NOISE EXPOSURE INFORMATION DESIRED

Where sufficient data exists, evaluate land use suitability with respect to a "normalized" value of CNEL or L_{dn}. Normalized values are obtained by adding or subtracting the constants described in Table 1 to the measured or calculated value of CNEL or L_{dn}.

B. NOISE SOURCE CHARACTERISTICS

The land use-noise compatibility recommendations should be viewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic but occurs less frequently. Therefore, different sources yielding the same composite noise exposure do not necessarily create the same noise environment. The State Aeronautics Act uses 65 dB CNEL as the criterion which airports must eventually meet to protect existing residential communities from unacceptable exposure to aircraft noise. In order to facilitate the purposes of the Act, one of which is to encourage land uses compatible with the 65 dB CNEL criterion wherever possible, and in order to facilitate the ability of airports to comply with the Act, residential uses located in Community Noise Exposure Areas greater than 65 dB should be discouraged and considered located within normally unacceptable areas.

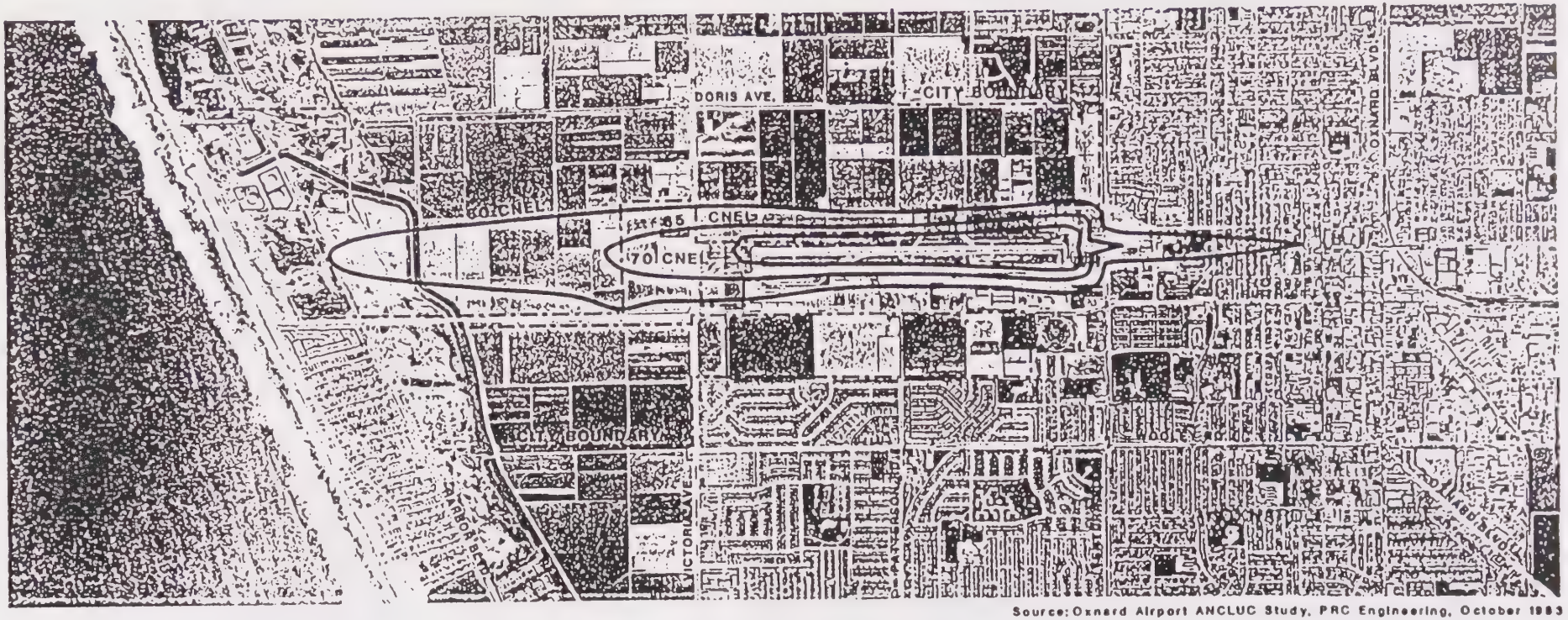
C. SUITABLE INTERIOR ENVIRONMENTS

One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL of L_{dn}. This requirement, coupled with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum acceptable distance to a noise source.

D. ACCEPTABLE OUTDOOR ENVIRONMENTS

Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically below the maximum considered "normally acceptable" for that land use category, may be appropriate.

Figure 2.16.2



Source: Oxnard Airport ANCLUC Study, PRC Engineering, October 1983

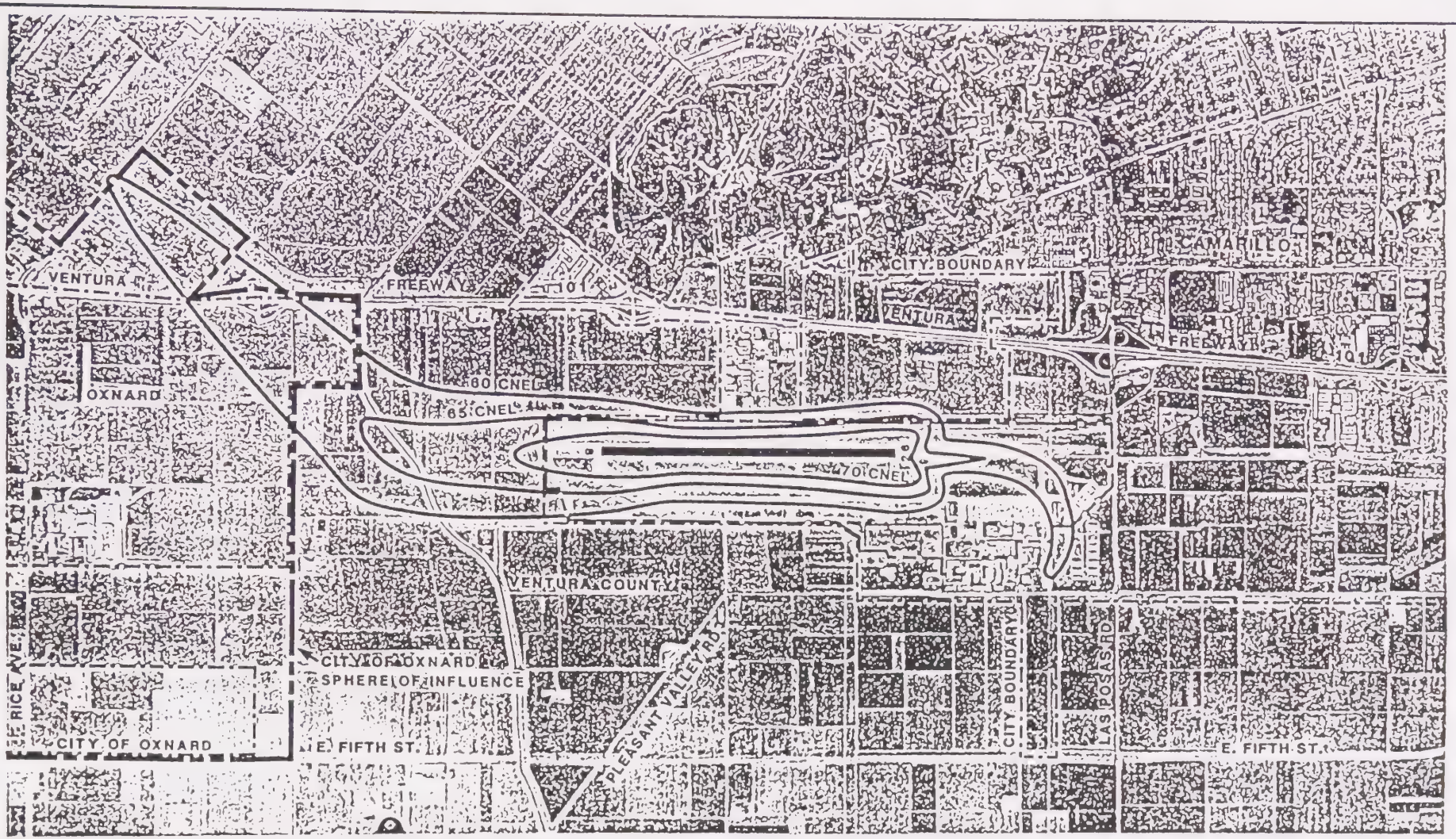
Figure 2.16.3

N

2000 0 2000

SCALE IN FEET

	Oxnard Airport Environmental Impact Report	LONG-RANGE FORECAST NOISE CONTOURS



SOURCE: CAMARILLO AIRPORT ANCLUC STUDY, PRC ENGINEERING, OCTOBER 1983

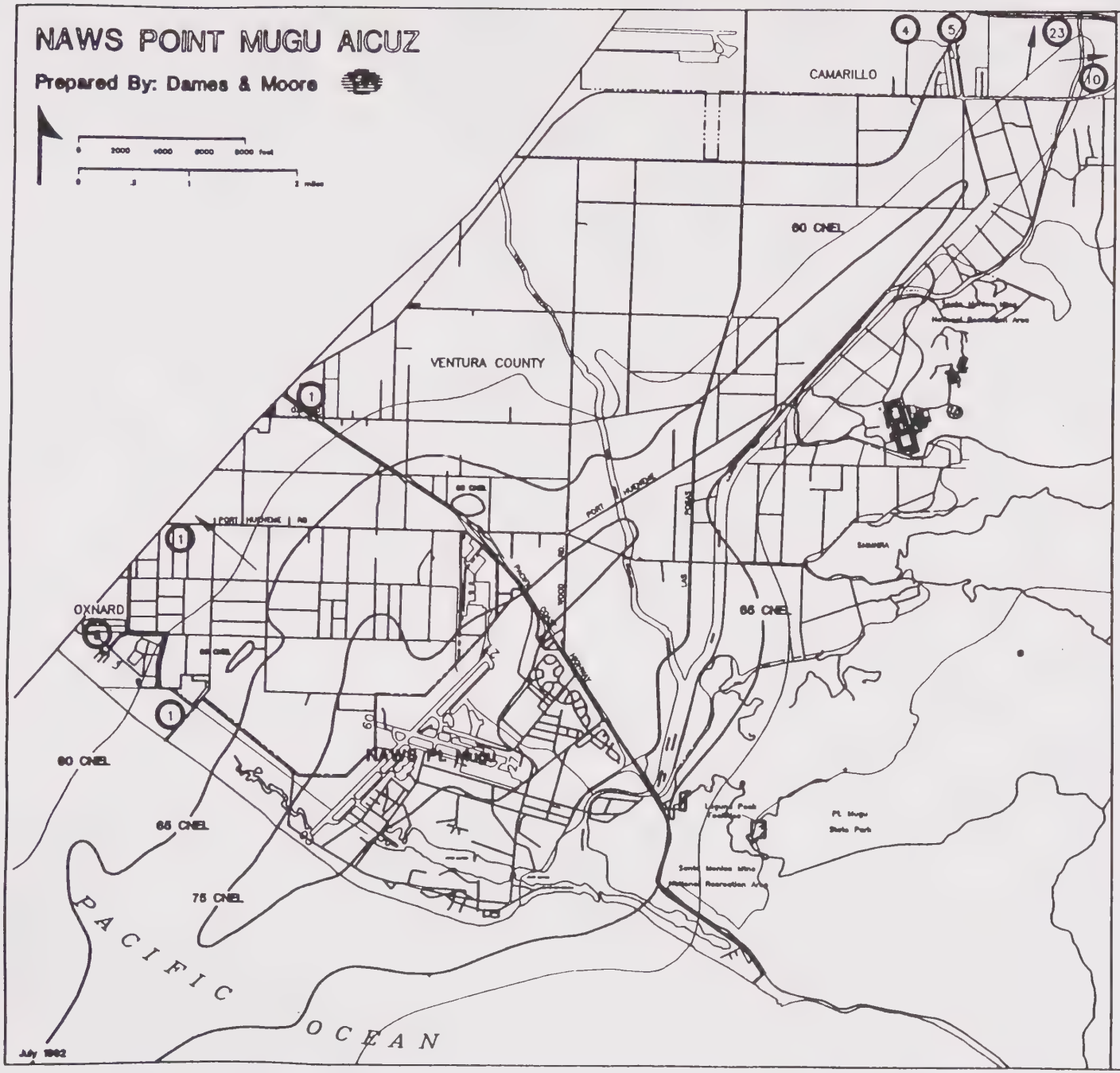
Figure 2.16.4

N

2000 0 2000

SCALE IN FEET

	Camarillo Airport Environmental Impact Report	Long-Range Forecast dB CNEL Contours	



Noise Contours and Noise Complaints

Legend

(#) NUMBER AND APPROXIMATE LOCATION OF NOISE COMPLAINTS

SOURCE:
NAVAL AIR WEAPONS STATION POINT MUGU - AIR INSTALLATION COMPATIBLE USE STUDY - SEPT. 1992

HAZARDS APPENDIX
FIGURE 2.16.5

R.7/12/94

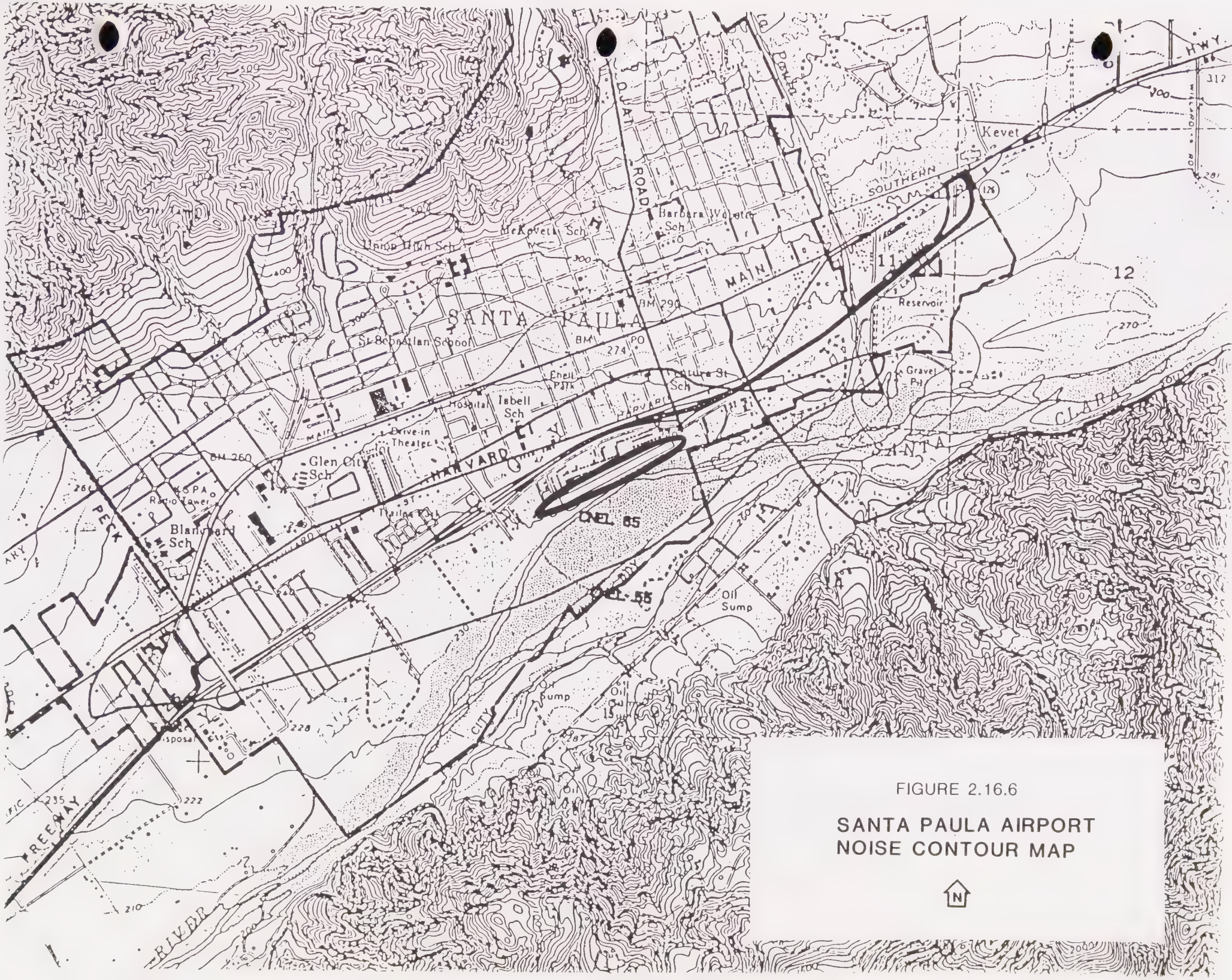
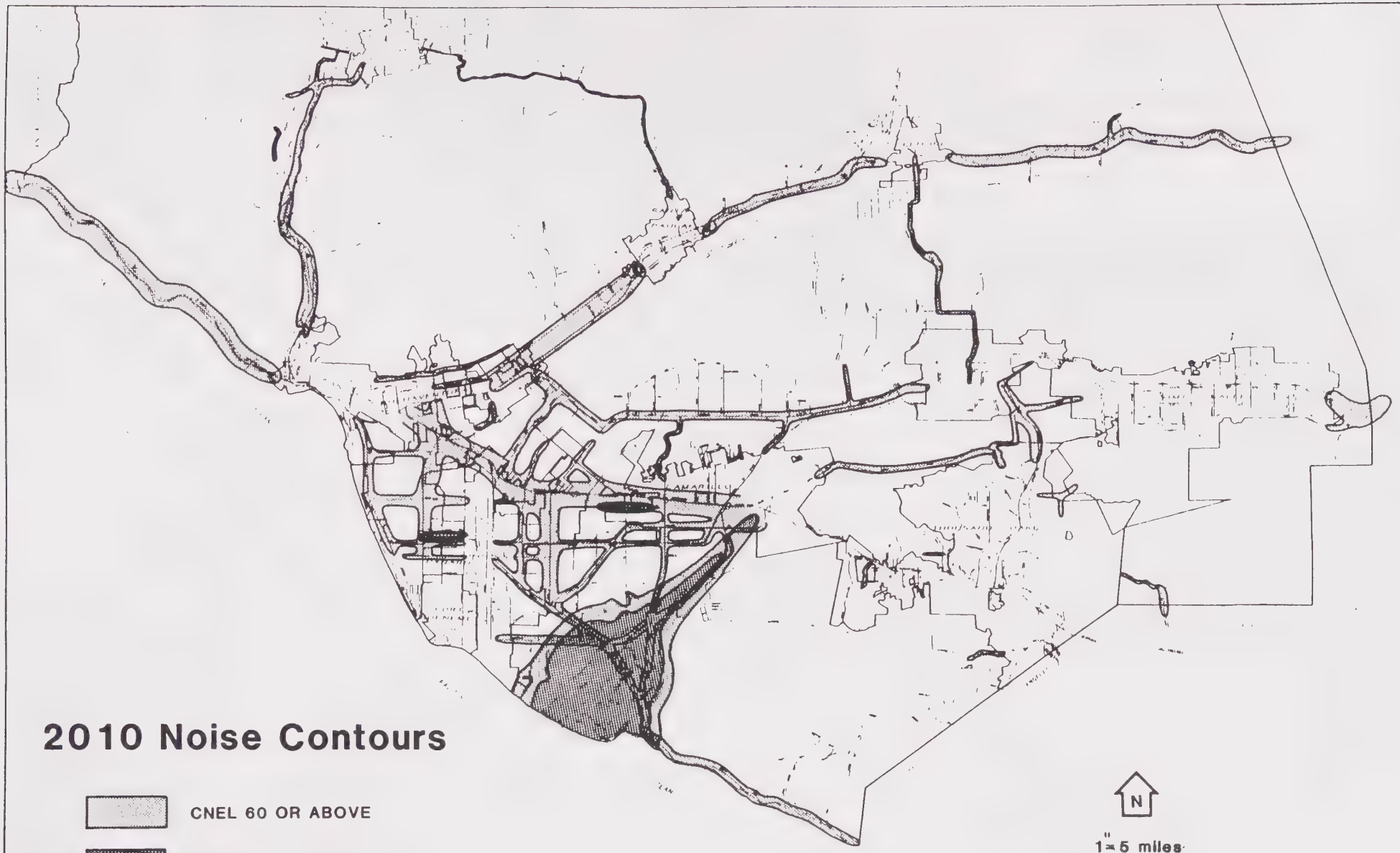


FIGURE 2.16.6

SANTA PAULA AIRPORT
NOISE CONTOUR MAP

N



2010 Noise Contours

CNEL 60 OR ABOVE

CNEL 65 OR ABOVE

N

1" = 5 miles

SOURCE: BRUCE WALKER, NOISE CONSULTANT - 1987
& NAWS POINT MUGU - 1992

VENTURA COUNTY GENERAL PLAN
HAZARDS APPENDIX FIGURE 2.16.7

R.7/12/94

Figure 2.16.8

EXISTING AND YEAR 2010 CNEL CONTOURS FOR COUNTY ROADS

ROADWAY	EXISTING ADT	EXISTING CNEL							2010 ADT	YEAR 2010 CNEL						
		45	50	55	60	65	70	75		45	50	55	60	65	70	75
Highway 1																
S/O Calleguas Creek	13,200	3,948	1,833	851	396	185	88		20,000	5,209	2,421	1,121	522	242	114	54
Calleguas Creek to Las Posas Rd.	9,000	3,058	1,419	658	307	144	69		18,000	4,856	2,253	1,046	486	226	107	50
Las Posas Rd. to Wood Rd.	12,000	4,059	1,885	875	406	190	90		12,000	4,059	1,885	875	406	190	90	
Wood Rd. to Hueneme Rd.	18,500	5,413	2,515	1,169	542	252	119	57	19,000	5,517	2,563	1,189	552	257	121	58
Hueneme Rd. to Nauman Rd.	20,200	5,746	2,670	1,238	575	267	126	60	16,000	4,922	2,283	1,060	492	229	108	51
N/O Nauman Rd.	20,300	5,765	2,678	1,244	577	268	126	60	16,000	4,922	2,283	1,060	492	229	108	51
Highway 23																
S/O Tierra Rejada Rd.	16,300	5,561	2,584	1,201	556	259	122	58	20,000	6,377	2,961	1,375	638	297	139	67
Broadway to Fillmore	4,000	1,257	585	271	126	59			7,000	1,827	849	394	183	85	36	
Highway 33																
Shell Road to Canada Larga Rd.	25,000	5,301	2,458	1,143	530	247	116	55	40,000	7,248	3,365	1,561	726	337	158	76
Canada Larga Rd. to Casitas Vista	23,500	5,264	2,446	1,135	527	245	115	55	29,000	6,061	2,815	1,307	607	282	132	64
Casitas Vista Rd. to Oak View	22,000	3,721	1,726	802	372	173	81		24,000	3,939	1,829	849	395	184	87	
Oak View to Encino Drive	16,500	3,071	1,425	661	307	143	67		23,000	3,828	1,778	826	384	179	85	
Encino Dr. to W/O Ojai City Limit	18,000	3,250	1,511	701	325	151	71		21,000	3,605	1,671	777	361	169	80	
Highway 34																
W/O Pleasant Valley Rd.	9,700	2,007	931	432	202	96			12,000	2,312	1,073	498	232	109	52	
Pleasant Valley Rd. to Wood Rd.	9,300	1,951	905	421	196	93			17,000	2,919	1,355	629	293	137	66	
Wood Rd. to Camarillo City Limit	8,800	1,878	872	406	189	90			16,000	2,799	1,300	604	281	132	63	
Camrillo City Limit to Hwy. 118	8,700	1,771	822	382	178	85			17,000	2,765	1,284	597	277	130	63	
Highway 118																
W/O Vineyard Ave.	11,000	3,907	1,812	842	391	182	85	36	35,000	8,446	3,926	1,822	845	393	185	91
Vineyard Ave. to Rose Ave.	10,000	3,871	1,799	836	388	180	84		22,000	6,555	3,044	1,413	657	306	145	72
Rose Ave. to Santa Clara Ave.	10,000	3,871	1,799	836	388	180	84		20,000	6,147	2,856	1,327	616	288	136	68
Santa Clara Ave. to La Vista Ave.	9,000	3,394	1,574	730	339	158	74		16,000	4,980	2,311	1,073	498	233	112	56
La Vista Ave. to Walnut Ave.	9,000	3,394	1,574	730	339	158	74		16,000	4,978	2,309	1,072	498	232	109	52
E/O Walnut Ave.	9,000	3,394	1,574	730	339	158	74		19,000	5,579	2,592	1,202	559	260	122	58
W/O Price Rd.	9,000	3,394	1,574	730	339	158	74		16,000	4,978	2,309	1,072	498	232	109	52
Price Rd. to Lewis Rd.	9,000	2,917	1,356	628	292	136	64		17,000	4,458	2,073	961	447	208	98	46
Lewis Rd. to Balcom Cyn.	11,000	2,870	1,332	620	288	134	63		19,000	4,137	1,919	891	415	195	95	
E/O Balcom Cyn.	11,000	3,348	1,553	722	336	157	75		19,000	4,821	2,238	1,039	483	22	109	54
E/O Simi City Limit	65,000	9,281	4,305	1,999	929	435	209	110	102,000		5,820	2,701	1,253	583	275	137

Figure 2.16.8 (cont.)

EXISTING AND YEAR 2010 CNEL CONTOURS FOR COUNTY ROADS

ROADWAY	EXISTING ADT	EXISTING CNEL							2010 ADT	YEAR 2010 CNEL						
		45	50	55	60	65	70	75		45	50	55	60	65	70	75
Highway 126																
W/O Saticoy Ave.	26,000	7,268	3,370	1,564	728	341	164	88	36,000	9,010	4,191	1,944	904	422	201	103
Wells Rd. to Santa Paula	28,000	6,767	3,140	1,459	679	318	154	83	46,000	9,418	4,380	2,031	945	440	209	107
Santa Paula to Old Telegraph Rd.	14,800	4,762	2,207	1,025	476	222	103	47	21,000	6,006	2,790	1,296	602	280	131	63
Old Telegraph Rd. Jct. to	16,000	5,011	2,328	1,081	501	233	109	50	23,000	6,390	2,968	1,378	639	297	139	67
Fillmore	10,000	3,694	1,713	796	369	172	80		19,500	5,765	2,678	1,244	577	269	126	60
Fillmore to Cavin Rd.	10,000	4,223	1,958	910	422	196	92	40	18,500	6,358	2,953	1,371	636	296	139	67
Cavin Rd. to Torrey Rd.	10,000	4,223	1,958	910	422	196	92	40	17,000	6,018	2,796	1,296	602	280	131	63
Torrey Rd. to Center St.	14,000	5,143	2,384	1,107	514	239	111	52	15,000	5,375	2,498	1,161	538	251	118	56
Center St. to L. A. County																
Highway 101																
Santa Barbara City to Ventura	51,000		4,818	2,233	1,038	484	228	114	102,00		7,641	3,544	1,648	766	357	171
Beardsley Rd. to Las Posas Rd.	92,000		6,214	2,886	1,338	623	292	142	0		9,024	4,186	1,941	905	423	205
									61,000							
Highway 150																
Hwy. 33 to Burnham Rd.	3,100	1,216	564	262	122	57			4,000	1,438	669	310	144	68		
Santa Paula to Bridge Rd.									4,000	1,480	687	318	148	69		
Bridge Rd. to Ojai									4,000	808	374	174	81			
Highway 232 - Vineyard Ave.																
N/O Hwy. 101	30,500	4,300	2,000	928	431	201	95		35,000	4,717	2,193	1,016	472	220	104	48
S/O Central Ave.	13,000	2,439	1,133	526	246	117	58		23,000	3,566	1,657	769	358	169	83	
N/O Central Ave.	12,000	3,909	1,815	843	393	184	90		19,000	5,309	2,465	1,145	533	248	119	58

Figure 2.16.8 (cont.)

EXISTING AND YEAR 2010 CNEL CONTOURS FOR COUNTY ROADS

ROADWAY	EXISTING ADT	EXISTING CNEL							2010 ADT	YEAR 2010 CNEL						
		45	50	55	60	65	70	75		45	50	55	60	65	70	75
Santa Ana Rd.																
at Santa Ana Blvd.	1,580	752	348	162	76				4,000	1,396	648	301	140	65		
Ventura Ave.																
N/O Ventura City Limits	6,380	2,226	1,034	480	223	104	47		8,000	2,587	1,201	559	259	121	57	
Harbor Blvd.																
N/O Olivas Park Dr.	21,000	4,029	1,871	869	404	190	92		23,000	4,289	1,990	923	429	201	97	
S/O Olivas Park Dr.	16,570	4,018	1,863	866	401	187	87	37	26,000	5,419	2,512	1,166	542	253	121	60
S/O Gonzales Rd.	15,600	3,852	1,786	830	386	179	83		29,000	5,827	2,705	1,255	584	273	129	64
Olivas Park Dr.																
Victoria Ave. to Telephone Rd.	7,660	2,277	1,059	491	230	110	54		12,000	3,074	1,425	662	309	146	73	
Telephone Rd. to Harbor Blvd.	7,660	2,277	1,057	491	228	106	49		8,000	2,342	1,087	504	235	109	50	
Victoria Ave.																
N/O Gonzales Rd.	23,050	5,753	2,665	1,239	575	269	128	64	64,000		5,272	2,446	1,138	530	251	125
S/O Gonzales Rd.	27,300	4,048	1,879	872	406	191	93		64,000	7,149	3,322	1,541	717	336	163	87
Gonzales Rd.																
W/O Oxnard City Limits	11,790	3,198	1,484	689	321	152	76		27,000	5,561	2,578	1,198	556	261	127	66
W/O Rice Ave.	4,400	1,199	558	260	123	60			10,000	2,074	961	448	210	101		

Figure 2.16.8 (cont.)

EXISTING AND YEAR 2010 CNEL CONTOURS FOR COUNTY ROADS

ROADWAY	EXISTING ADT	EXISTING CNEL							2010 ADT	YEAR 2010 CNEL						
		45	50	55	60	65	70	75		45	50	55	60	65	70	75
Fifth St.																
W/O Victoria Ave.	6,820	1,605	746	346	161	75			10,000	2,074	961	448	210	101		
Wooley Rd.																
W/O Victoria Ave.									13,000	2,467	1,145	532	248	115	54	
E/O Rose Ave.									11,000	2,208	1,027	477	223	107	52	
Foothill Rd.																
W/O Kimball Rd.	6,070	2,054	954	443	206	96	43		10,000	2,861	1,330	616	287	133	62	
W/O Saticoy Ave.	1,180	499	232	108	50				4,000	1,125	522	243	113	53		
Rose Ave.																
at Wooley Rd.									28,000	4,116	1,913	887	414	196	98	
S/O Gonzales Rd.	13,400	2,518	1,169	543	253	117	55		32,000	4,505	2,088	970	453	213	106	
N/O Highway 101	3,130	1,319	612	285	134	65			8,000	2,472	1,148	533	249	119	59	
N/O Central Ave.									4,000	1,556	723	336	157	76		
Santa Clara Ave.																
N/O Highway 101	10,610	2,977	1,384	643	298	140	66		13,000	3,417	1,582	737	343	161	80	
N/O Central Ave.	10,610	2,985	1,385	642	298	138	65		15,000	3,752	1,743	810	376	177	87	
Bristol Rd.																
E/O Johnson Dr.	13,390	2,981	1,386	644	299	139	65		20,000	3,899	1,812	840	390	181	85	
Rice Ave.																
Highway 101 to Gonzales Ave.	17,350	4,131	1,919	892	414	192	90	39	23,000	6,525	3,028	1,410	654	306	147	76
Gonzales Ave. to Colonia	17,350	4,140	1,922	892	414	195	94		23,000	6,525	3,028	1,410	654	306	147	76
Colonia to Fifth St.	17,350	4,131	1,919	892	414	192	90	39	23,000	6,525	3,028	1,410	654	306	147	76
Fifth St. to Wooley Rd.	16,000	3,920	1,817	844	392	183	87		23,000	6,525	3,028	1,410	654	306	147	76
Wooley Rd. to Channel Islands Bl.	10,000	2,864	1,330	617	287	135	65		13,000	4,467	2,071	962	449	212	105	
Channel Islands Bl. to Pleasant	9,500	2,771	1,287	597	278	130	63		11,000	3,996	1,854	862	401	190	96	

Figure 2.16.8 (cont.)

EXISTING AND YEAR 2010 CNEL CONTOURS FOR COUNTY ROADS

ROADWAY	EXISTING ADT	EXISTING CNEL							2010 ADT	YEAR 2010 CNEL						
		45	50	55	60	65	70	75		45	50	55	60	65	70	75
Central Ave.																
S/O Santa Clara Ave.	8,560	2,490	1,156	537	250	116	54		11,000	2,948	1,367	635	296	140	70	
S/O Beardsley Rd.	7,030	2,187	1,015	471	220	103	48		12,000	3,118	1,450	673	313	146	70	
Telegraph																
W/O Briggs Rd.	4,290	1,874	871	405	188	88	38		9,000	3,071	1,425	663	307	143	67	
E/O Briggs Rd.	3,810	1,730	804	373	173	81			5,000	2,073	963	447	208	97	43	
Hueneme Rd.																
E/O Las Posas Rd.	5,850	1,720	798	371	172	80			12,000	2,778	599	279	133	66		
Las Posas Rd. to Wood Rd.	7,010	1,939	901	418	194	90	39		13,000	2,929	632	295	140	70		
S/O Wood Rd.	7,820	2,087	969	450	209	97	44		11,000	2,619	565	264	126	62		
at Olds Rd.	12,170	3,266	1,515	705	327	152	71		24,000	5,141	1,107	514	241	115	56	
Pleasant Valley Rd.																
Oxnard City Limits to Wood Rd.	13,260	2,966	1,377	639	298	139	67		15,000	3,223	1,496	694	324	153	76	
N/O Cawelti Rd.	14,520	3,151	1,462	679	316	148	71		20,000	3,899	1,811	841	392	184	90	
Lewis Rd.																
Potrero Rd. to Cawelti Rd.	3,600	1,243	578	268	125	58			9,000	2,291	1,065	494	231	111	54	
N/O Cawelti Rd.	6,470	1,837	353	397	184	86	37		13,000	2,929	1,357	632	295	140	70	
Balcom Cyn. Rd.																
S/O Stockton Rd.	910	497	231	108	49				5,000	1,549	719	333	155	72		
Broadway																
E/O Highway 23									6,000	1,751	812	378	178	87		
W/O Happy Camp Rd.									6,000	1,749	813	376	175	82		

Figure 2.16.8 (cont.)

EXISTING AND YEAR 2010 CNEL CONTOURS FOR COUNTY ROADS

ROADWAY	EXISTING ADT	EXISTING CNEL							2010 ADT	YEAR 2010 CNEL						
		45	50	55	60	65	70	75		45	50	55	60	65	70	75
Walnut Canyon Rd.																
N/O Moorpark City Limits									6,000	1,751	812	378	178	87		
Santa Rosa Rd.																
W/O Yucca Dr.	7,820	2,435	1,128	523	243	113	53		16,000	3,918	1,819	845	393	185	90	
E/O Yucca	8,710	2,611	1,212	563	262	122	57		11,000	3,056	1,416	658	307	145	72	
Moorpark																
S/O Moorpark City Limits	5,400	1,628	757	351	163	76			6,000	1,749	813	376	175	82		
N/O Thousand Oaks City Limits	8,190	2,152	999	464	215	100	45		5,000	1,549	719	333	155	72		
Tierra Rejada Rd.																
E/O Highway 23	15,050	4,326	2,007	933	434	203	98		6,000	2,342	1,088	506	236	113	56	
Wendy Dr.																
S/O Highway 101	14,180	2,617	1,215	564	262	123	59		16,000	2,837	1,316	612	285	135	67	
Camino dos Rios																
W/O Lynn Rd.	4,810	1,271	592	275	128	60			9,000	1,933	898	416	194	90	39	
Main St.																
Piru	2,640	1,012	470	218	102	46			4,000	1,334	619	288	134	63		
Santa Susana Pass Rd.	6,500	2,147	997	463	215	100	45		9,000	2,672	1,240	575	267	124	58	

Figure 2.16.8 (cont.)

EXISTING AND YEAR 2010 CNEL CONTOURS FOR COUNTY ROADS

ROADWAY	EXISTING ADT	EXISTING CNEL							2010 ADT	YEAR 2010 CNEL						
		45	50	55	60	65	70	75		45	50	55	60	65	70	75
Kanan Rd.																
E/O Thousand Oaks City Limits									5,000	1,549	719	335	158	78		
N/O Los Angeles County Line	12,230	2,815	1,306	606	283	134	67		20,000	3,899	1,811	841	392	184	90	
La Luna Ave.																
S/O Lomita Ave.	3,810	1,090	506	235	109	50			5,000	1,306	606	282	131	61		
El Roblar Dr.																
W/O Maricopa Hwy.	6,900	826	384	178	83				8,000	912	424	197	92	40		
Lomita Ave.																
E/O Tico Rd.	3,920	567	263	123	57				5,000	666	310	144	67			

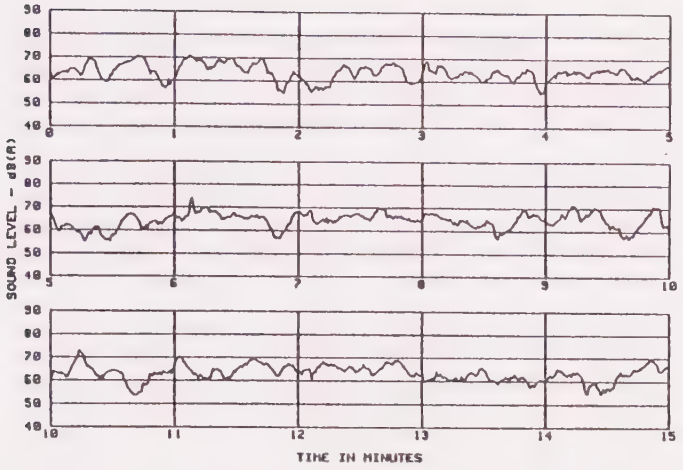
Source: Bruce Walker, Fall 1987

Figure 2.16.9

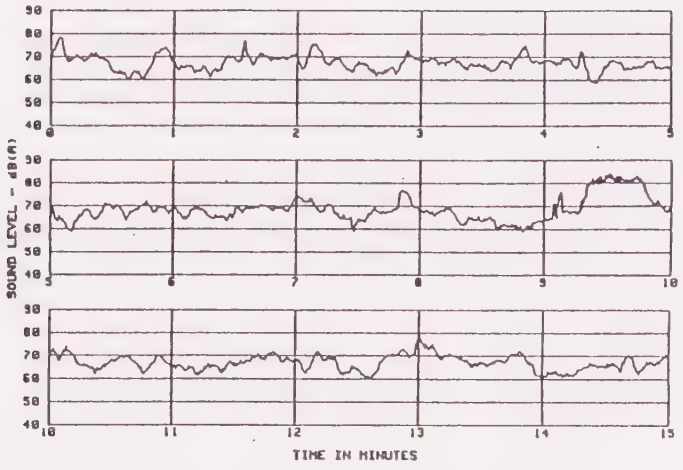
Year 2010 CNEL Contours for Proposed Highway Links

ROADWAY	Existing ADT	EXISTING CNEL (Not Applicable)							2010 ADT	YEAR 2010 CNEL						
		45	50	55	60	65	70	75		45	50	55	60	65	70	75
New Los Angeles Ave. Extension									3,000	872	405	190	92			
First St. - Sunset Hills Extension									17,000	2,767	1,284	98	278	132	66	
Sunset Hills E-W									13,000	2,314	1,076	499	233	112	55	
Sunset Hills N-S									17,000	2,767	1,284	598	278	132	66	
Rose Ave. Extension									7,000	1,534	712	331	156	78		
Lake Sherwood Bypass									8,000	2,342	1,088	506	236	113	56	
Casitas Springs Bypass									20,000	4,993	2,315	1,076	500	234	112	55
Route 1 Bypass																
Hwy. 101 to Gonzales Rd.									85,000		6,951	3,224	1,500	697	326	156
Gonzales Rd. to Colonia									80,000		6,675	3,097	1,438	669	312	150
Colonia to Fifth St.									69,000		6,056	2,811	1,305	607	284	137
Fifth St. to Wooley Rd.									60,000		5,512	2,560	1,188	553	260	126
Wooley Rd. to Channel Islands Bl.									34,000	8,119	3,778	1,754	815	380	180	92
Channel Islands Bl. to Pleasant									30,000	7,489	3,472	1,614	748	350	166	86

Source: Bruce Walker, Fall 1987

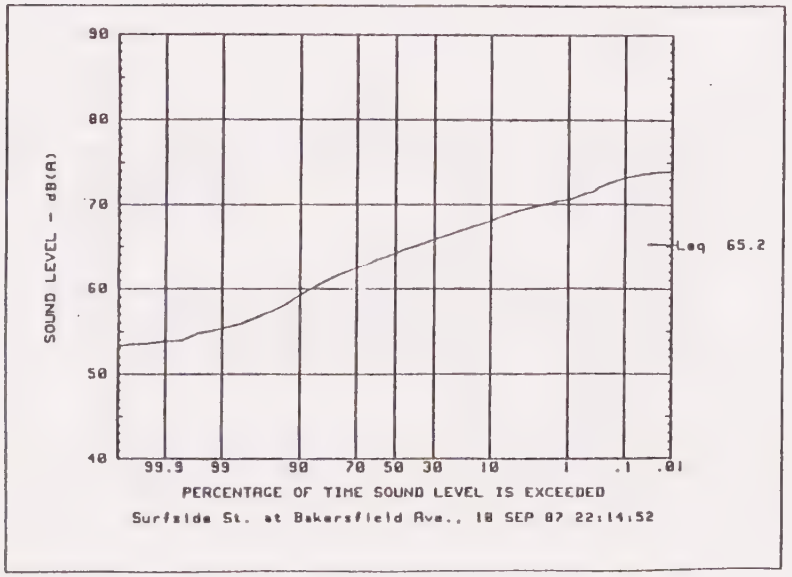


Surfside St. at Bakersfield Ave., 18 SEP 87 22:14:52



Surfside St. at Bakersfield Ave., 18 SEP 87 11:47:45

Figure 2.16.10



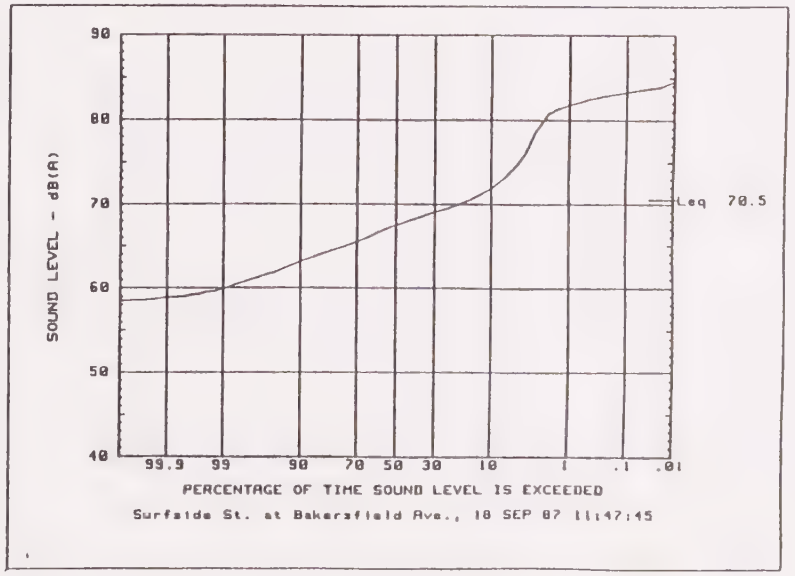
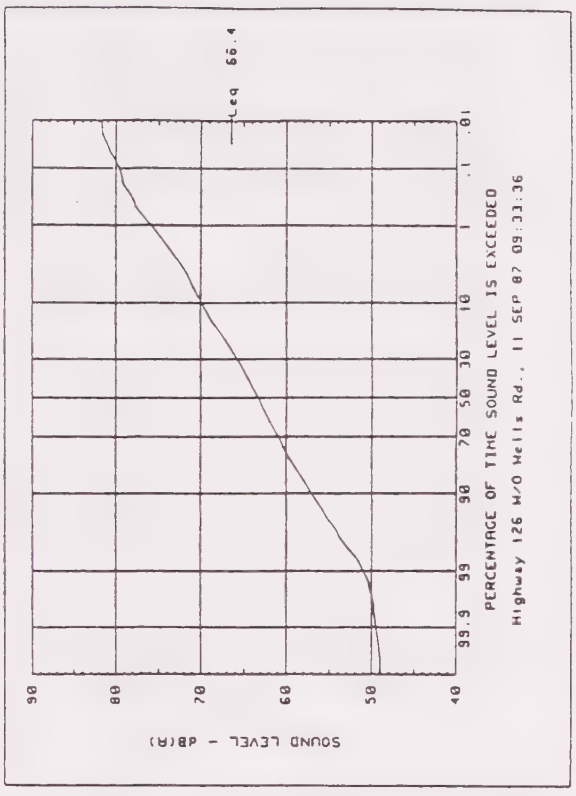
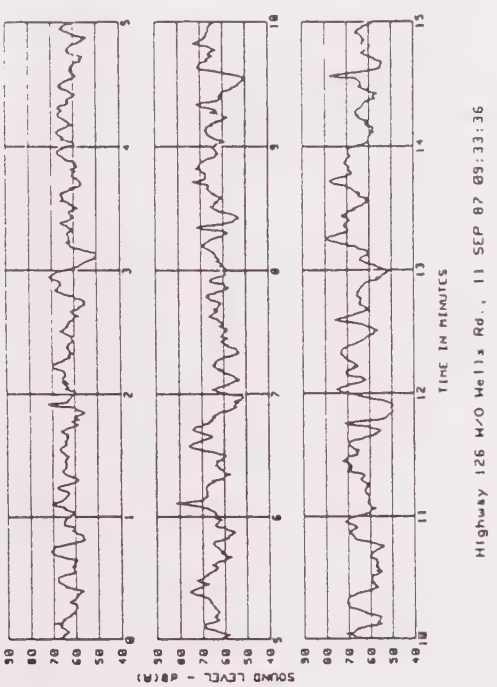
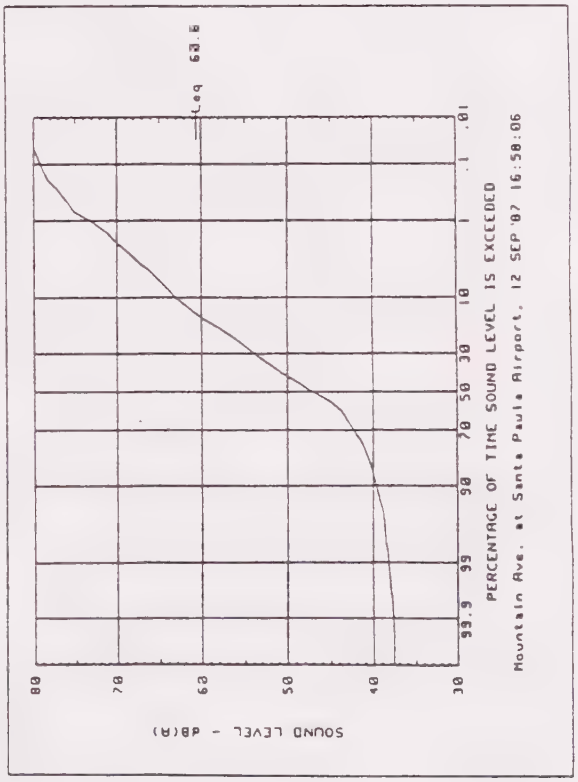
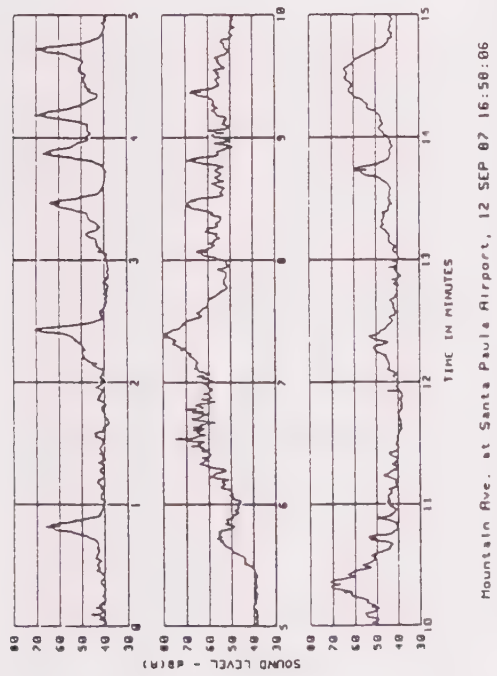


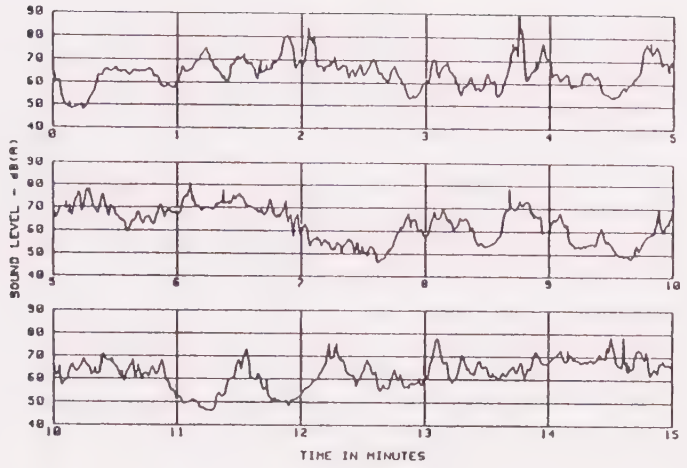
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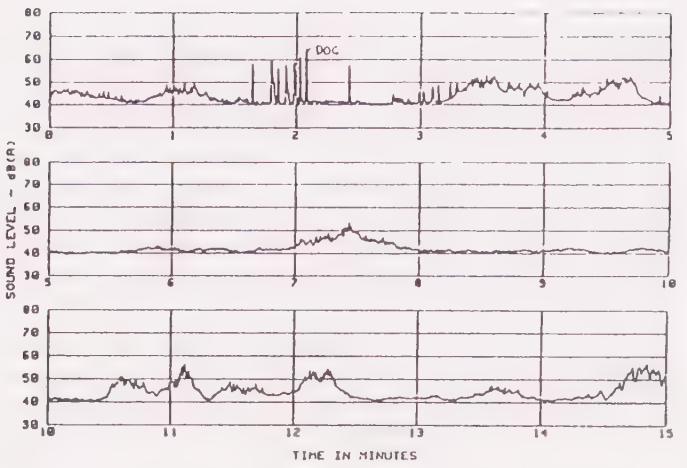






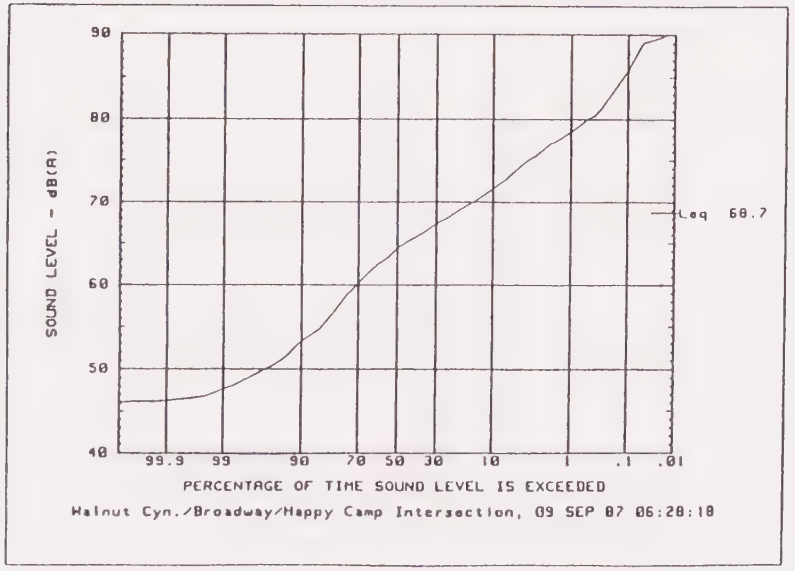


Walnut Cyn./Broadway/Happy Camp Intersection, 09 SEP 87 06:28:18

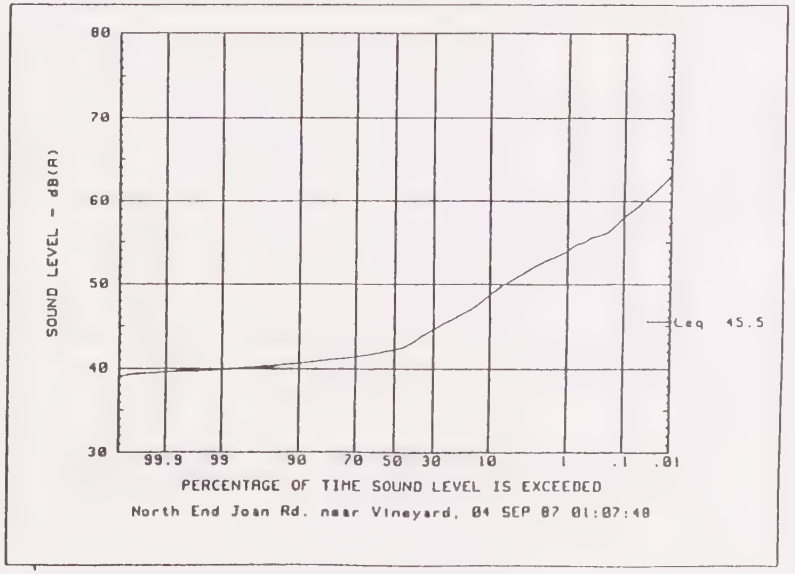


North End Joan Rd. near Vineyard, 04 SEP 87 01:07:48

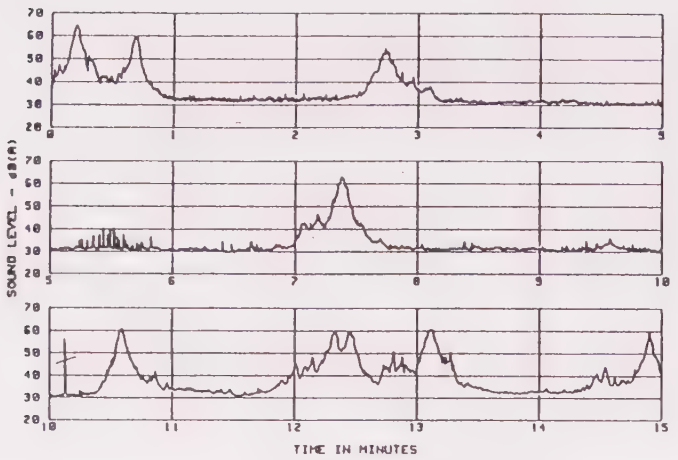
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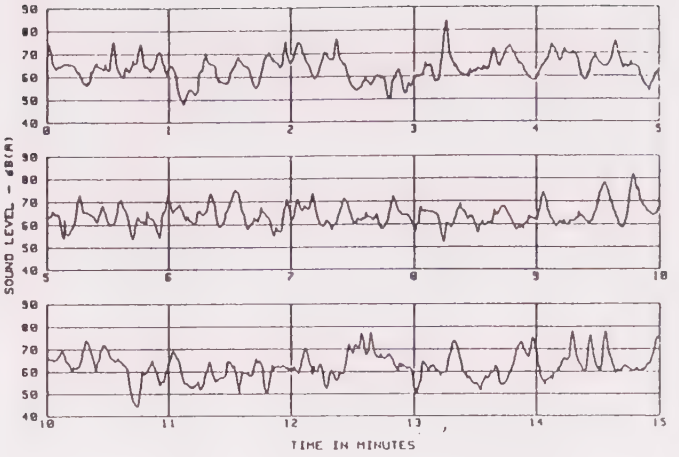
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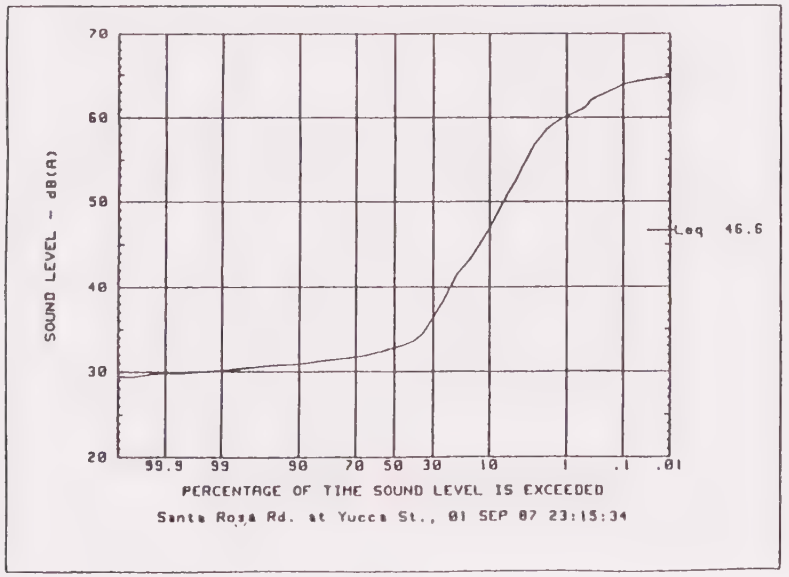


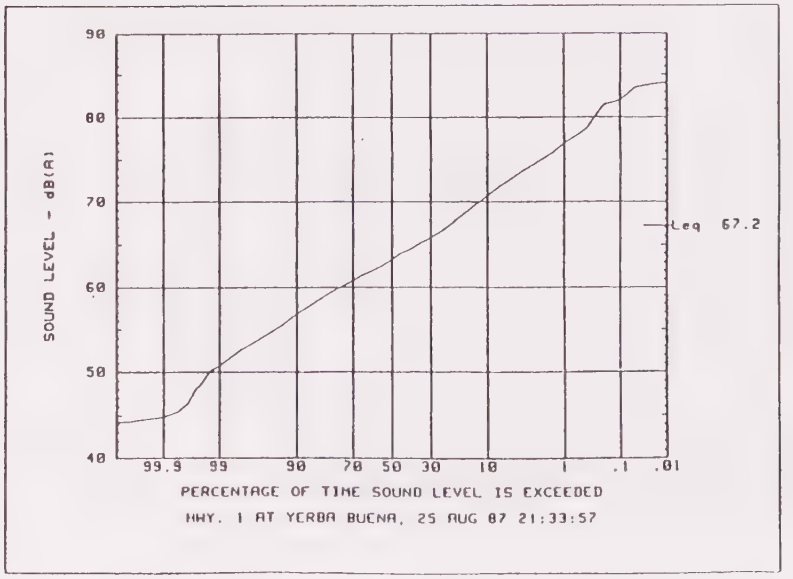
Santa Rosa Rd. at Yucca St., 01 SEP 87 23:15:34

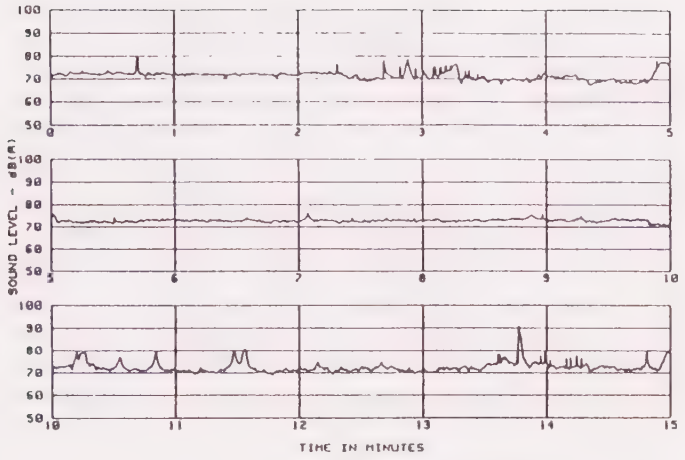


Highway 1 at Yerba Buena, 25 AUG 87 21:33:57

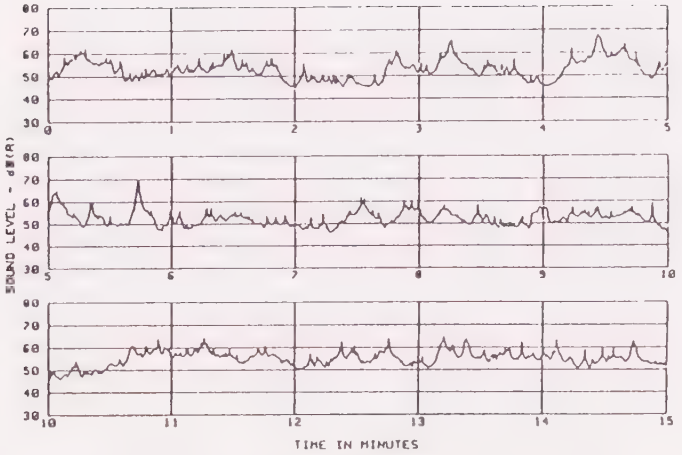
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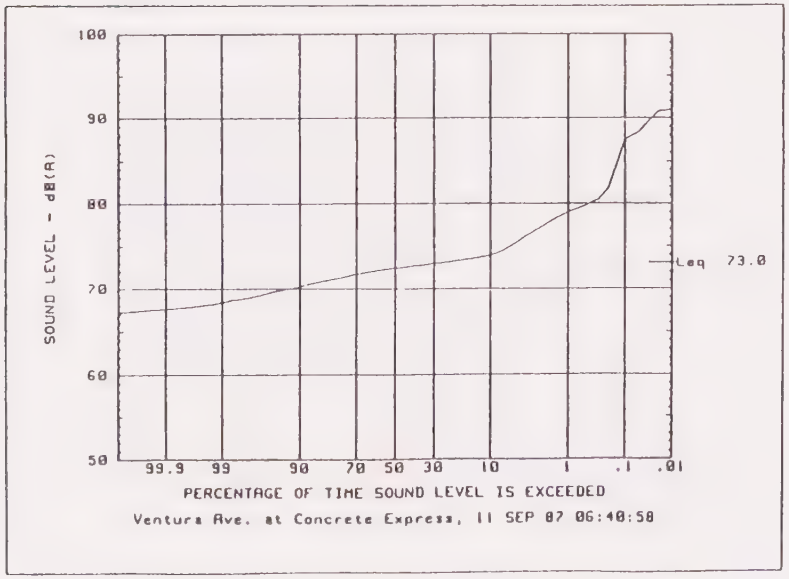


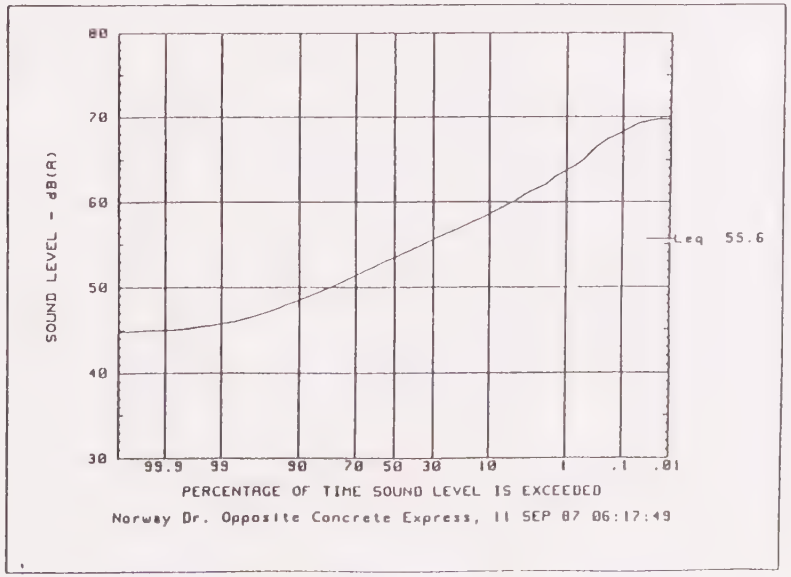
Ventura Ave. at Concrete Express, 11 SEP 87 06:40:58

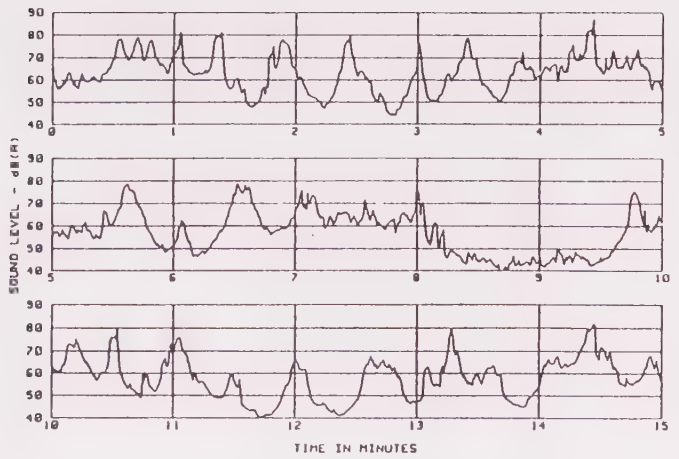


Norway Dr. Opposite Concrete Express, 11 SEP 87 06:17:49

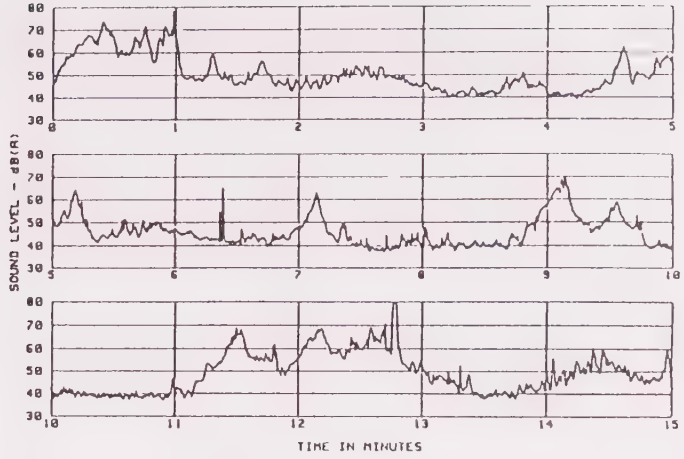
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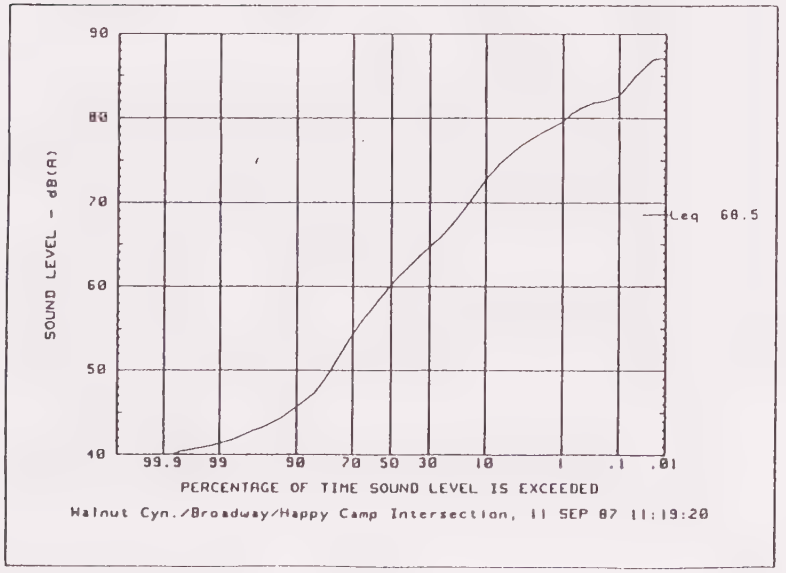


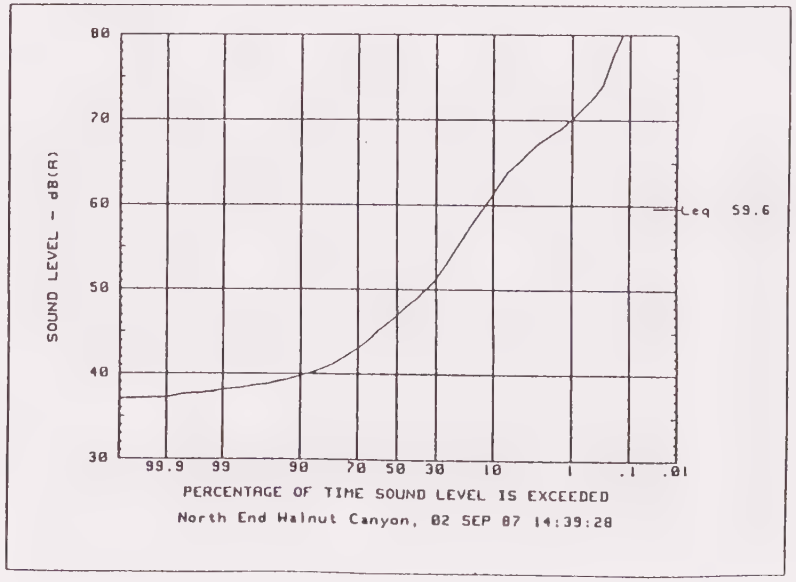


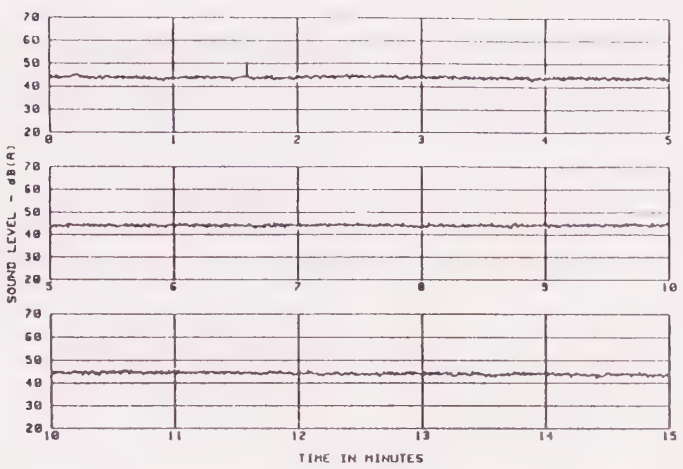
Walnut Cyn./Broadway/Happy Camp Intersection, 11 SEP 87 11:19:20



North End Walnut Canyon, 02 SEP 87 14:39:28







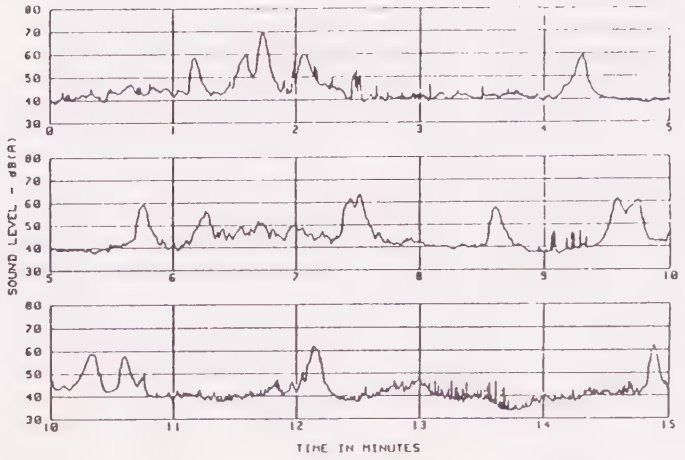
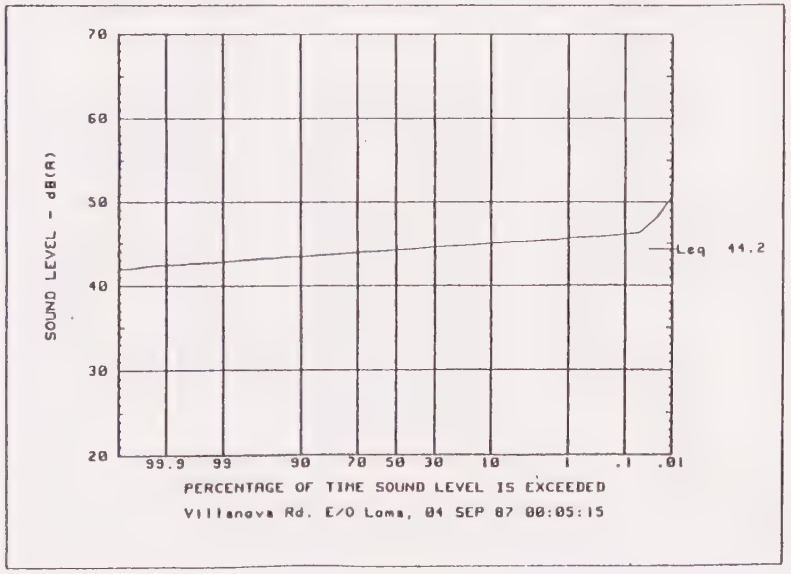
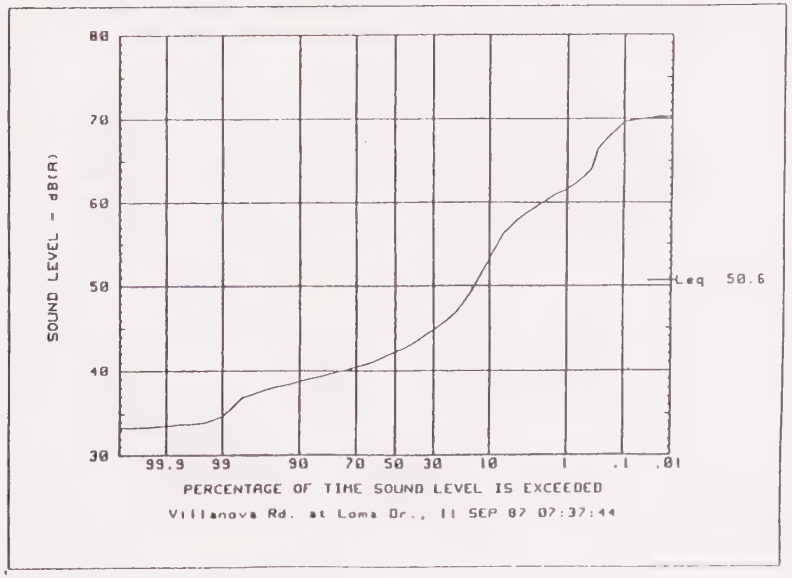
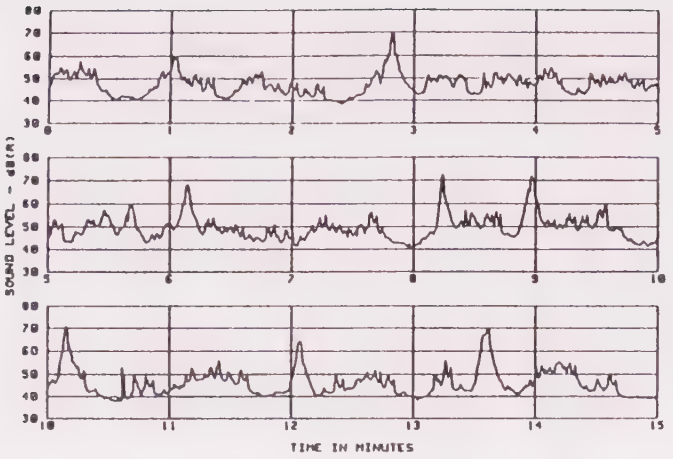


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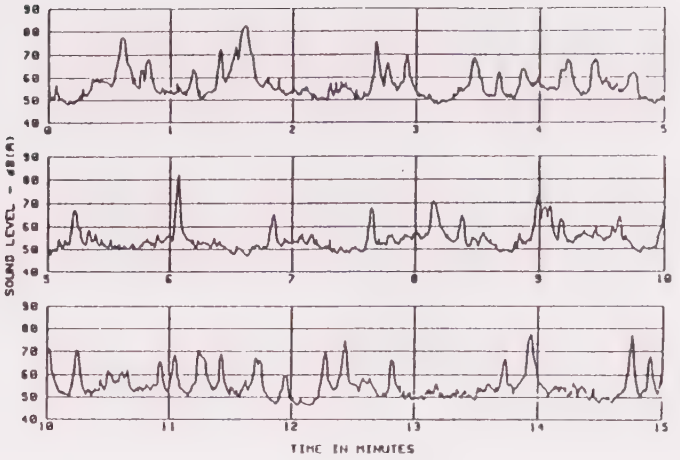
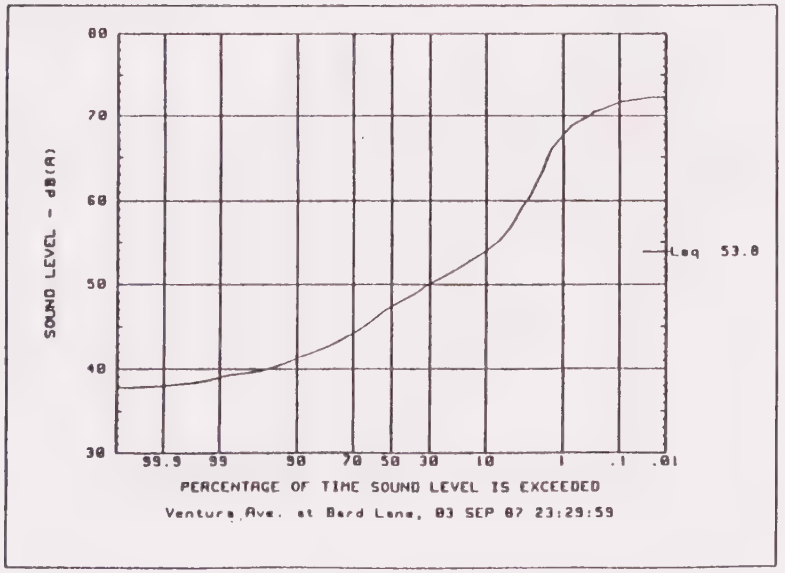
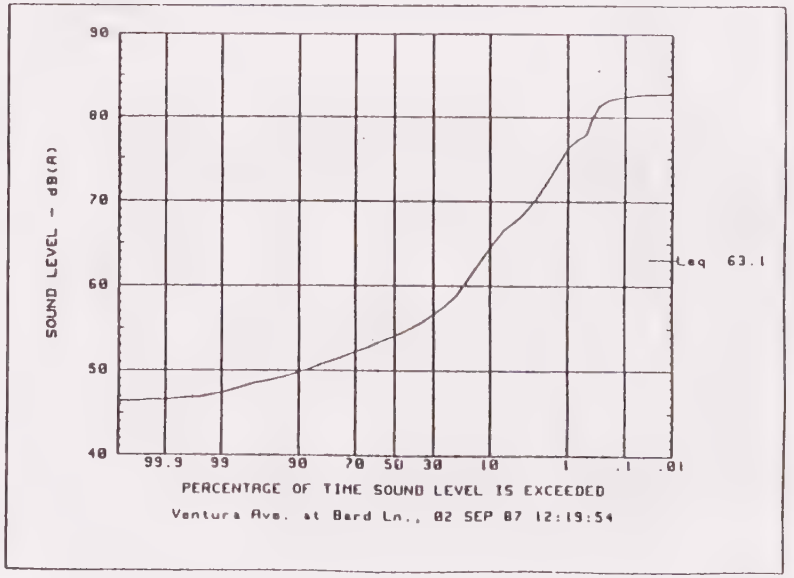
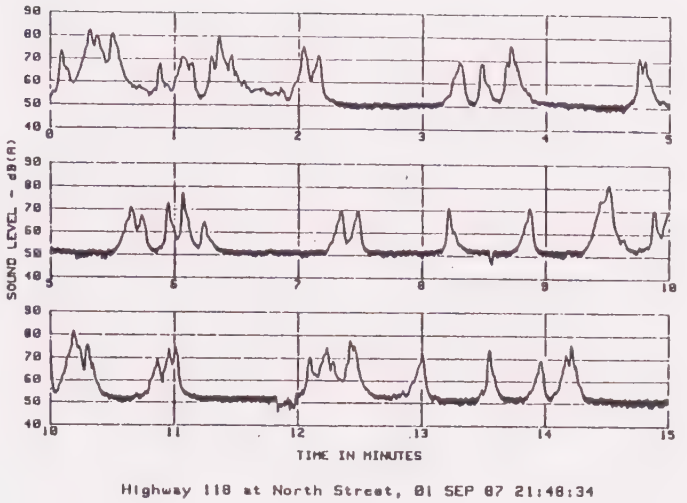
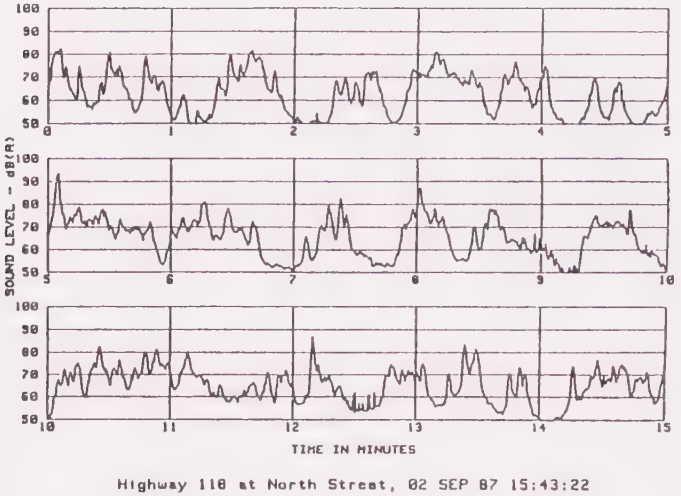


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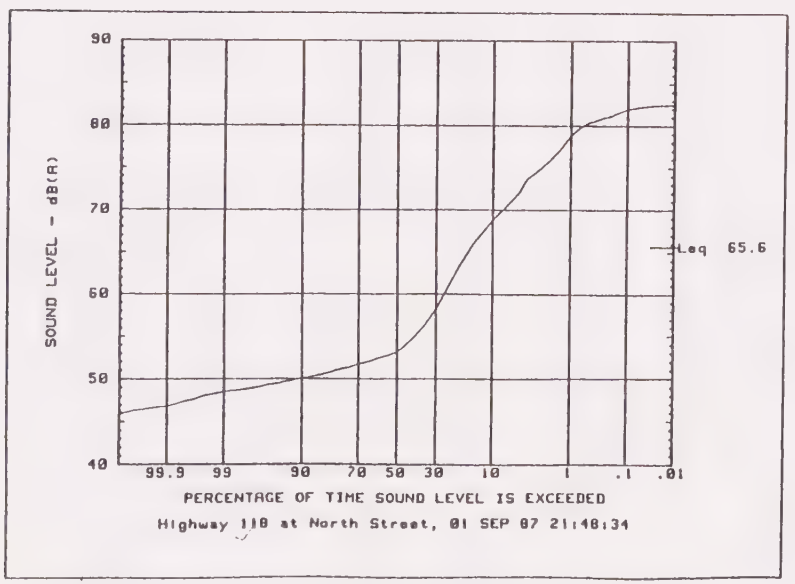


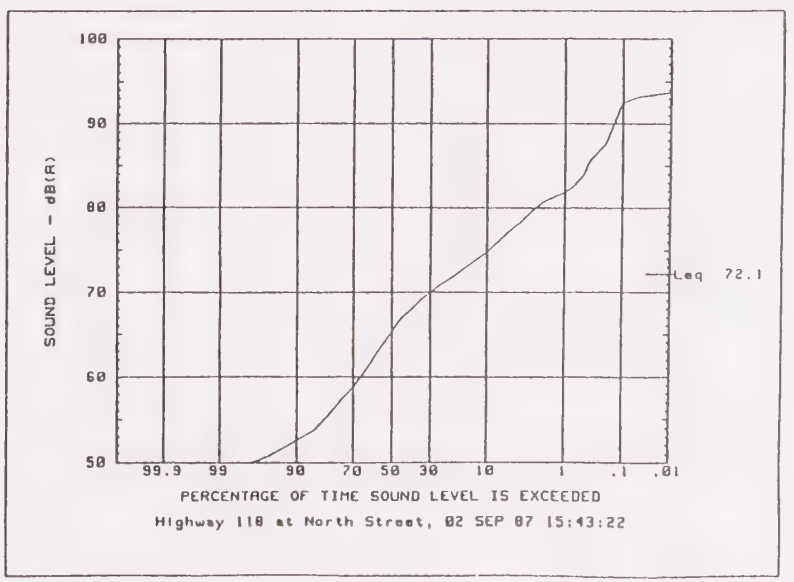


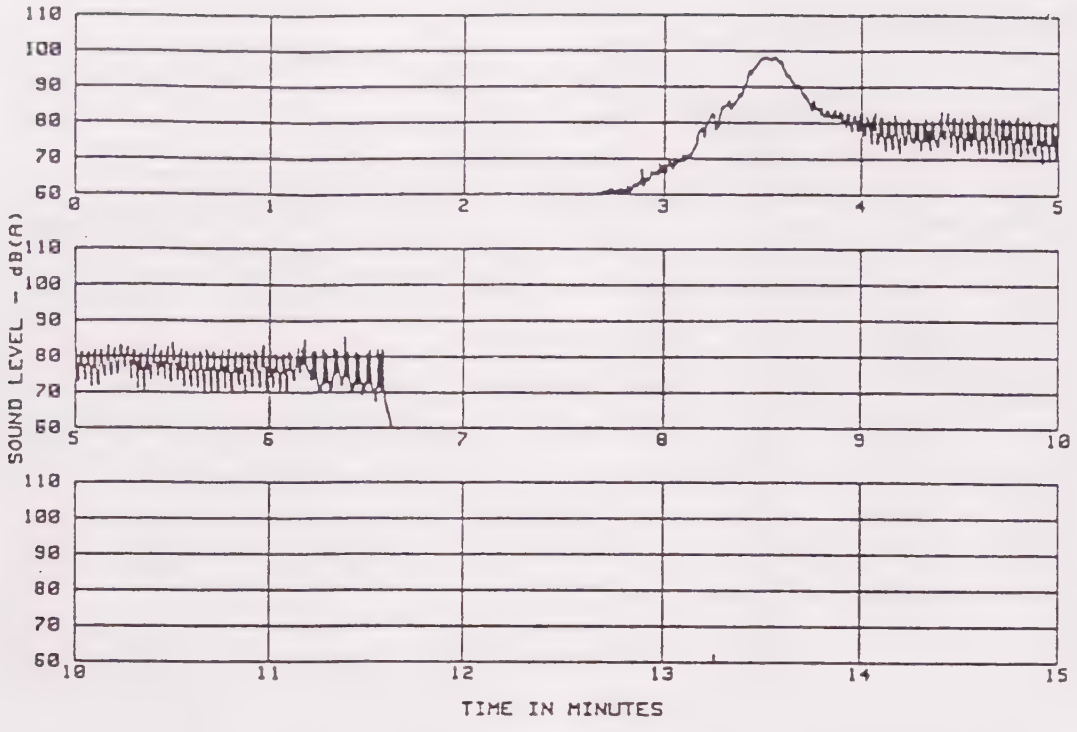


Source: Bruce Walker, Fall 1987

Figure 2.16.10 (Continued)







Freight Train at First St. Simi Valley, 04 SEP 87 02:33:11

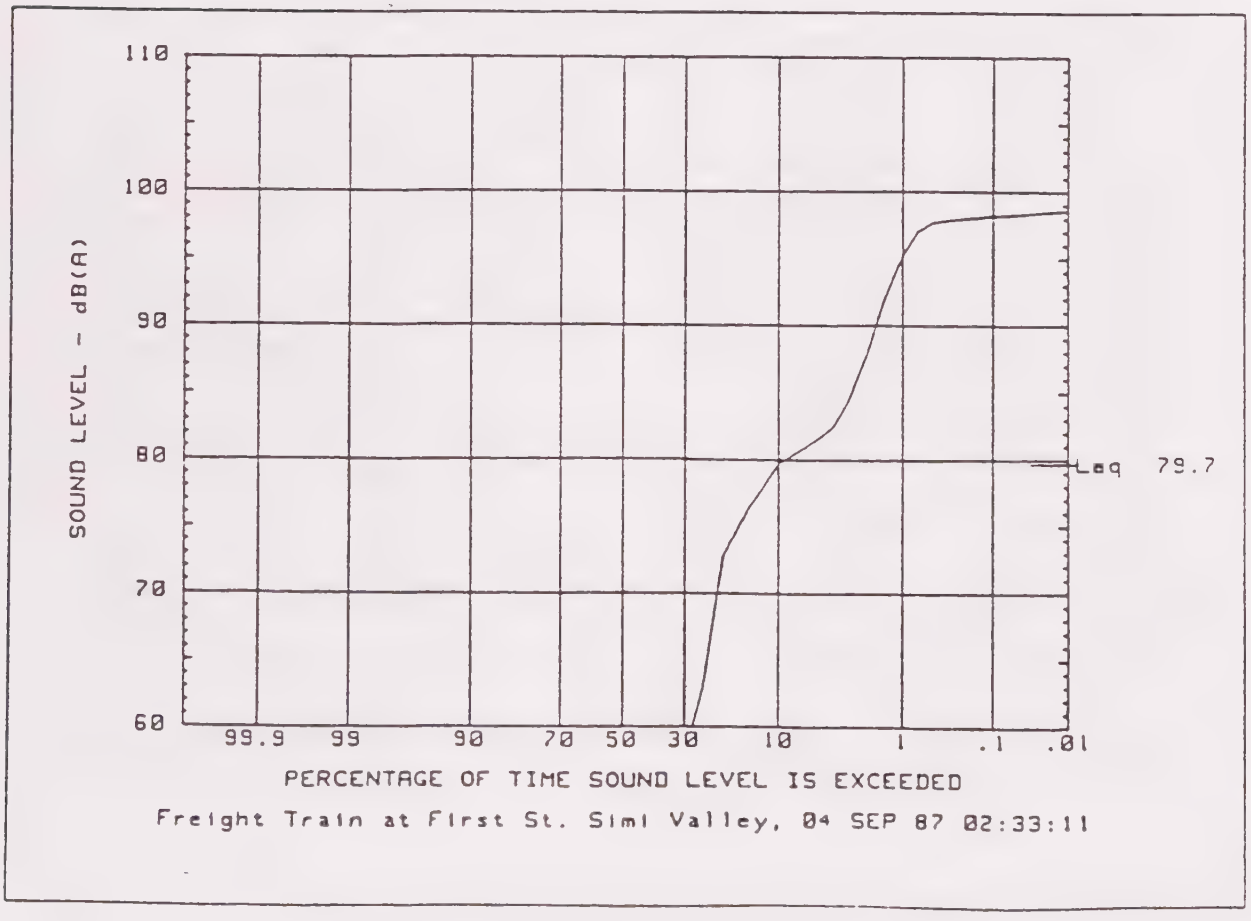


Figure 2.16.11

Source: Bruce Walker, Fall 1987

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1988

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VENTURA COUNTY GENERAL PLAN
LAND USE APPENDIX

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Amended - December 19, 1989
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3. LAND USE APPENDIX

3.1 INTRODUCTION

The Land Use Appendix which follows provides data on land use, housing, and employment which were used to prepare the goals, policies, and programs contained in the Land Use Chapter of the General Plan. The data were also used in the preparation of the Circulation Plan and in the preparation of the appendices on issues of Countywide concern, such as solid and liquid waste planning and water resources planning.

Section 3.2 inventories existing land uses, and compares existing developed areas to the holding capacity of the County, assuming full buildout under currently-adopted (1987) city and County general plans. This section includes assumptions on population, housing, commercial and industrial floor area, and employment which make it possible to project population and employment for small geographic areas.

Section 3.3 describes the process which was followed in the preparation and adoption of the Countywide population and dwelling unit forecasts in 1985. This process utilized the holding capacity data described in Section 3.2. Section 3.3 also includes an assessment of housing needs in the County from 1987 to 1992, based on the adopted forecasts. This section also lists the existing State and Federal housing programs and identifies potential programs which could be adopted at the local level to lower housing costs and meet local housing needs.

Section 3.4 presents an employment forecast for the County which was developed jointly by the County, the State Department of Transportation (CALTRANS), and the Southern California Association of Governments (SCAG) in 1985 and 1986 for the Ventura County Area Transportation Study (VCATS). The employment data included in this forecast have been compared with the employment holding capacity data presented in Section 3.2, and have also been compared with the population and dwelling unit forecasts to determine the jobs/population and jobs/housing balance at the local level.

3.2 INVENTORY OF EXISTING LAND USES AND LAND USE PLANS

3.2.1 EXISTING LAND USES

Figures 3.2.2 and 3.2.3 present an inventory of 1984 developed acreages by land use designation for each Growth and Nongrowth Area in the County. The Growth/Nongrowth Area boundaries are shown in Figure 3.2.1.

The Growth and Nongrowth Area boundaries are based on a network of Analysis Zones created by the State Department of Transportation (CALTRANS) and the County Public Works Agency for transportation planning purposes (the County has been divided into 389 Analysis Zones). The Growth and Nongrowth Areas are aggregations of Analysis Zones in various subareas of the County.

All the cities in the County lie within identified Growth Areas. In general, the entire present and future incorporated area of each city has been included within the appropriate Growth Area. However, because the Growth Area boundaries are based on Analysis Zone boundaries, and because the Analysis Zone boundaries (on which the Growth Area boundaries are based) do not necessarily coincide with future city limit lines, urban development will not necessarily extend to the outer boundaries of all Analysis Zones which comprise a Growth Area.

In addition to the ten Growth Areas for each city, there are also three unincorporated areas which have been designated as Growth Areas: Oak Park, Piru, and the Ventura River Valley. These three areas are identified as Growth Areas for two reasons: (1) they represent areas where urbanized development has occurred or is expected to occur under County Area Plans; and (2) they represent the urban center of an Area of Interest identified by the Local Agency Formation Commission (LAFCO).

The remainder of the inventory covers Nongrowth Areas, which are the composite of all remaining Analysis Zones within each Area of Interest, and which are not expected to receive significant urban development.

The land use designations which appear in Figures 3.2.2 and 3.2.3 are taken from currently-adopted (1987) general plans for each city and the County.

The determination of developed areas is based on 1984 aerial photographs. The boundaries of existing developed areas were placed on Important Farmlands Inventory maps by County Resource Management Agency staff. This determination does not identify individual undeveloped or vacant parcels which are located in predominantly developed areas.

In addition to total acreages, Figure 3.2.2 presents the gross building intensity standards in dwelling units per acre, from which a 1984 dwelling unit estimate was derived for each planning area. Figure 3.2.2 also presents population density factors (population per dwelling unit), from which it is possible to determine 1984 population and population density by planning area.

The building intensity factors used in Figure 3.2.2 are based on currently-adopted general plans. The population density standards were based on household size projections prepared by the State Department of Finance in July 1984.

The DOF projections showed a slight increase in household size through 1985, followed by a long-term decline (see Figure 3.2.4). These projections were used to develop a Countywide population per dwelling unit ratio forecast. The Countywide forecast, in turn, was used to develop ratios for each Growth and Nongrowth Area. The resultant 1984 ratios appear in Figure 3.2.2

No attempt was made to develop different ratios for each residential land use category. The ratios which appear were developed by the Countywide Planning Program Advisory Committee in 1984 and 1985, were received by each City Council, and were adopted by the County Board of Supervisors on May 7, 1985, at the same time the Countywide population and dwelling unit forecasts were adopted. A further discussion on the forecasts is presented in Section 3.2.2 below.

Figure 3.2.3 presents the average building intensity factors for commercial, industrial, and public buildings in floor area per acre. It should be emphasized that the building intensity factors presented in Figure 3.2.3 are not <u>standards</u>; they are simply an average which are used to develop land-use-based employment estimates.

The methodology for preparing this table was used by the City of Simi Valley in preparing a draft Environmental Impact Report for the City's General Plan Update. For each commercial, industrial, and public designation within each local general plan, an average building intensity figure is presented, expressed in ratio of floor area to gross land area. In addition, for each of the above designations, an average number of employees per 1,000 square feet is also presented.

Given the total number of acres for each land use designation, the total potential floor area and total number of employees for each designation were calculated.

In general, the same density standards which were used by the City of Simi Valley were used. However, for industrial uses, the Simi standards resulted in far higher employee/acre ratios than generally occur, according to available planning literature:

Draft Simi Valley General Plan

Light Industrial	35 employees/gross acre
Business Park	70 employees/gross acre
Industrial Reserve	35 employees/gross acre

Urban Land Use Planning (Chapin)

Extensive Industrial	6 employees/gross acre
Intermediate Industrial	18 employees/gross acre
Intensive Industrial	50 employees/gross acre

Urban Planning and Design Criteria (De Chiara)

Light Industrial	22 employees/gross acre
Industrial Park	16 employees/gross acre
Heavy Industrial	6 employees/gross acre

Institute of Transportation Engineers
Informational Report

Light Industrial	16.4 employees/gross acre
Industrial Park	16.0 employees/gross acre
Warehousing	14.6 employees/gross acre
Manufacturing	18.4 employees/gross acre
Heavy Industrial	8.2 employees/gross acre

For light industrial, general industrial, and industrial park areas, building intensity and employment density averages were used which would result in a density of approximately 17 employees per acre. For heavy industrial areas, averages which resulted in a density of 6 employees per acre were used. However, in Simi Valley, the density averages developed by the City staff were used, since they are based on actual density patterns within the City.

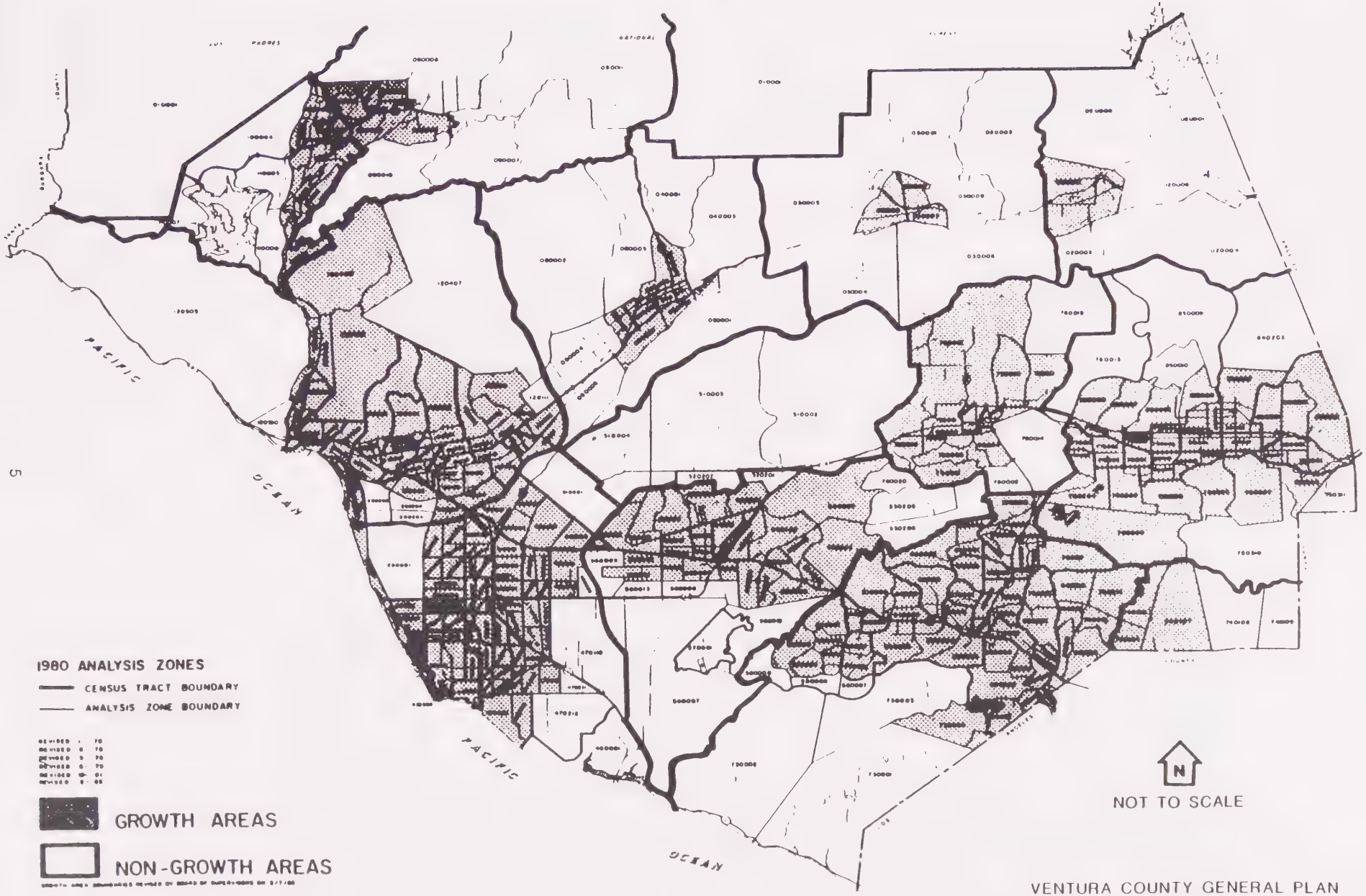
3.2.2 FUTURE LAND USES

Figures 3.2.5 and 3.2.6 present future land use acreages, population and employment densities, and building intensities based on adopted city and County general plans. The same geographic areas which were used in Figures 3.2.2 and 3.2.3 are repeated here. The major difference in the future land use tables is that they assume full "buildout" under current land use policies.

It should be recognized that true buildout never actually occurs, as general plans are periodically amended to anticipate and accommodate future housing and employment needs. Most of the city plans are targeted

to the year 2000; therefore, Figures 3.2.5 and 3.2.6 are assumed to present general land use, building intensity, and population density ranges which will exist in that year.

Because it is assumed that the general plans are targeted to the year 2000, the population-per-dwelling-unit ratios which were forecast for the year 2000 were used to determine population and population densities by land use category in Figure 3.2.5. These figures were used for comparison purposes in developing the official 1985 Countywide population and dwelling unit forecasts discussed below.



VENTURA COUNTY GENERAL PLAN
LAND USE APPENDIX - FIGURE 3.2.1

FIGURE 3.2.2

1984 RESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	DU'S/AC	DU'S	POP/DU	POP	POP/ACRE
CAMARILLO GA						
INSIDE SPHERE						
AGRICULTURAL	373	0.020	7	2.75	19	0.05
RURAL (COUNTY)	246	0.312	76	2.75	209	0.85
RURAL (CITY)	2,161	1.200	2,593	2.75	7,131	3.30
LOW	2,187	2.800	6,123	2.75	16,838	7.70
LOW-MEDIUM	590	5.600	3,304	2.75	9,086	15.40
MEDIUM	83	12.000	996	2.75	2,739	33.00
HIGH	97	20.000	1,940	2.75	5,335	55.00
MOBILE HOME	214	5.600	1,198	2.75	3,295	15.39
LAS POSAS EST	251	----	684	2.75	1,881	7.49
CAMARILLO HTS	235	----	1,195	2.75	3,286	13.98
STACY/TERRA						
BELLA LANES	23	2.180	50	2.75	138	5.98
OUTSIDE SPHERE						
OPEN SPACE	2,340	0.002	4	2.75	11	0.00
AGRICULTURAL	382	0.006	2	2.75	6	0.01
	9,182		18,172		49,973	
CAMARILLO NGA						
OPEN SPACE	5,108	0.002	10	3.52	35	0.01
AGRICULTURAL	12,800	0.006	76	3.52	268	0.02
RURAL	189	0.312	58	3.52	204	1.08
INSTITUTIONAL	50	7.800	390	3.52	1,373	27.46
	18,147		534		1,880	
FILLMORE GA						
INSIDE SPHERE						
AGRICULTURAL	123	0.006	0	3.26	0	0.00
ESTATE	11	0.680	7	3.26	23	2.07
LOW	261	3.200	835	3.26	2,722	10.43
MEDIUM	218	8.400	1,831	3.26	5,969	27.38
HIGH	2	14.000	28	3.26	91	45.64
OUTSIDE SPHERE						
OPEN SPACE	600	0.002	1	3.26	3	0.01
AGRICULTURAL	400	0.006	2	3.26	7	0.02
	1,615		2,704		8,815	
FILLMORE NGA						
OPEN SPACE	29,300	0.002	58	3.01	175	0.01
AGRICULTURAL	12,400	0.006	74	3.01	223	0.02
	41,700		132		398	
LAS POSAS NGA						
OPEN SPACE	8,525	0.002	17	3.68	63	0.01
AGRICULTURAL	17,500	0.006	105	3.68	386	0.02
RURAL	400	0.312	124	3.68	456	1.14
SOMIS	44	----	275	3.68	1,012	23.00
SATICOY C. CLUB	13	1.740	22	3.68	81	6.23
	26,482		543		1,998	

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.2 (Cont'd)

1984 RESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	DU'S/AC	DU'S	POP/DU	POP	POP/ACRE
MOORPARK GA						
INSIDE SPHERE						
RURAL LOW	1,613	0.190	306	3.27	1,001	0.62
RURAL HIGH	46	0.910	41	3.27	134	2.91
LOW	189	1.280	241	3.27	788	4.17
MEDIUM-LOW	61	2.080	126	3.27	412	6.75
MEDIUM	883	3.200	2,825	3.27	9,238	10.46
HIGH	92	5.600	515	3.27	1,684	18.30
VERY HIGH	58	12.000	696	3.27	2,276	39.24
AGRICULTURAL 1	396	0.096	38	3.27	124	0.31
OPEN SPACE 1	459	0.096	44	3.27	144	0.31
OPEN SPACE 2	649	0.024	15	3.27	49	0.08
OUTSIDE SPHERE						
OPEN SPACE	8,200	0.002	16	3.27	52	0.01
AGRICULTURAL	4,322	0.006	25	3.27	82	0.02
RURAL	80	0.312	24	3.27	78	0.98
HOME ACRES	108	2.180	235	3.27	768	7.12
	17,156		5,147		16,831	
MOORPARK NGA						
INSIDE SPHERE						
HIGH (CITY)	29	5.600	162	2.56	415	14.30
OUTSIDE SPHERE						
OPEN SPACE	7,070	0.002	14	2.56	36	0.01
AGRICULTURAL	230	0.006	1	2.56	3	0.01
	7,329		177		453	
NORTH HALF NGA						
OPEN SPACE	50,000	0.002	100	1.57	157	0.00
OAK PARK GA						
OPEN SPACE	3,753	0.002	7	3.37	24	0.01
RES 1-2	0	2.000	0	3.37	0	0.00
RES 2-4	0	4.000	0	3.37	0	0.00
RES 4-6	319	6.000	1,914	3.37	6,450	20.22
RES 6-8	0	8.000	0	3.37	0	0.00
RES 8-12	240	12.000	2,880	3.37	9,706	40.44
RES 16-20	0	20.000	0	3.37	0	0.00
	4,312		4,801		16,179	
OAK PARK NGA						
OPEN SPACE	7,806	0.002	15	3.13	47	0.01
RURAL	810	0.312	252	3.13	789	0.97
BELL CANYON	187	2.180	407	3.13	1,274	6.81
	8,803		674		2,110	

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.2 (Cont'd)

1984 RESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	DU'S/AC	DU'S	POP/DU	POP	POP/ACRE
OJAI GA						
INSIDE SPHERE						
OPEN SPACE	162	0.002	0	2.58	0	0.00
VERY LOW 1	148	0.024	3	2.58	8	0.05
VERY LOW 2	257	0.065	16	2.58	41	0.16
VERY LOW 3	115	0.128	14	2.58	36	0.31
LOW 1	326	0.269	87	2.58	224	0.69
LOW 2	7	0.607	4	2.58	10	1.47
LOW 3	65	1.200	78	2.58	201	3.10
MEDIUM 1	47	2.400	112	2.58	289	6.15
VERY LOW	231	0.455	105	2.58	271	1.17
LOW	504	1.200	604	2.58	1,558	3.09
MEDIUM	391	2.800	1,094	2.58	2,823	7.22
MEDIUM HIGH	83	6.000	498	2.58	1,285	15.48
HIGH	30	12.000	360	2.58	929	30.96
SPECIAL HOUSING	10	16.000	160	2.58	413	41.28
OUTSIDE SPHERE						
OPEN SPACE	401	0.002	0	2.58	0	0.00
VERY LOW 1	556	0.024	13	2.58	34	0.06
VERY LOW 2	188	0.065	12	2.58	31	0.16
VERY LOW 3	0	0.128	0	2.58	0	0.00
LOW 1	50	0.269	13	2.58	34	0.67
LOW 2	66	0.636	41	2.58	106	1.60
HIGH	23	7.600	174	2.58	449	19.52
	3,660		3,388		8,741	
OJAI NGA						
INSIDE SPHERE						
OPEN SPACE	401	0.002	0	2.72	0	0.00
VERY LOW 1	422	0.024	10	2.72	27	0.06
VERY LOW 2	195	0.065	12	2.72	33	0.17
LOW 1	17	0.269	4	2.72	11	0.64
LOW 2	49	0.636	31	2.72	84	1.72
OUTSIDE SPHERE						
VERY LOW 1	6,781	0.024	162	2.72	441	0.06
VERY LOW 2	1,722	0.065	111	2.72	302	0.18
LOW 1	953	0.269	256	2.72	696	0.73
LOW 2	66	0.607	40	2.72	109	1.65
OPEN SPACE	16,155	0.002	32	2.72	87	0.01
RURAL	980	0.312	305	2.72	830	0.85
	27,741		963		2,619	

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.2 (Cont'd)

1984 RESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	DU'S/AC	DU'S	POP/DU	POP	POP/ACRE
OXNARD GA						
INSIDE SPHERE						
OPEN SPACE	626	0.002	1	3.04	3	0.00
AGRICULTURAL	2,813	0.006	13	3.04	40	0.02
LOW	2,203	3.980	8,767	3.04	26,652	12.10
MEDIUM	1,783	4.800	8,558	3.04	26,016	14.59
HIGH	1,533	6.410	9,826	3.04	29,871	19.49
VERY HIGH	520	10.560	5,491	3.04	16,693	32.10
EL RIO PLAN	551	--	2,708	3.04	8,232	14.94
CEN COAST PLAN	106	29.040	3,078	3.04	9,357	88.27
OUTSIDE SPHERE						
OPEN SPACE	200	0.002	0	3.04	0	0.00
AGRICULTURAL	2,710	0.006	16	3.04	49	0.02
	12,545		38,458		116,912	
OXNARD NGA						
INSIDE SPHERE						
MEDIUM (CITY)	75	4.800	361	3.87	1,397	18.55
HIGH (CITY)	29	6.410	183	3.87	708	24.68
OUTSIDE SPHERE						
OPEN SPACE	1,331	0.002	2	3.87	8	0.01
AGRICULTURAL	12,573	0.006	75	3.87	290	0.02
POINT MUGU	200	2.850	570	3.87	2,206	11.03
	14,208		1,191		4,609	
PIRU GA						
OPEN SPACE	1,253	0.002	2	3.61	7	0.01
AGRICULTURAL	1,300	0.006	7	3.61	25	0.02
RESID 2-4	8	2.400	19	3.61	69	8.57
RESID 4-6	71	3.980	282	3.61	1,018	14.34
RESID 10-15	6	10.000	60	3.61	217	36.10
	2,638		370		1,336	
PIRU NGA						
OPEN SPACE	36,300	0.002	72	3.12	225	0.01
AGRICULTURAL	3,975	0.006	23	3.12	72	0.02
	40,275		95		296	
PORT HUENEME GA						
LOW	447	4.800	2,145	2.71	5,813	13.00
MEDIUM	256	9.600	2,457	2.71	6,658	26.01
HIGH	98	16.000	1,568	2.71	4,249	43.36
CBC BASE	179	2.970	531	2.71	1,439	8.04
	980		6,701		18,160	

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.2 (Cont'd)

1984 RESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	DU'S/AC	DU'S	POP/DU	POP	POP/ACRE
SANTA PAULA GA						
INSIDE SPHERE						
SINGLE FAMILY	399	5.600	2,234	2.91	6,501	16.29
MEDIUM	103	12.000	1,236	2.91	3,597	34.92
MEDIUM HIGH	302	16.800	5,073	2.91	14,762	48.88
HIGH	25	23.190	579	2.91	1,685	67.40
HILLSIDE	103	1.200	123	2.91	358	3.48
S PAULA WEST	6	7.260	43	2.91	125	20.86
S PAULA EAST	7	1.000	7	2.91	20	2.91
OUTSIDE SPHERE						
OPEN SPACE	300	0.002	0	2.91	0	0.00
AGRICULTURAL	2,575	0.006	15	2.91	44	0.02
	3,820		9,310		27,092	
SANTA PAULA NGA						
OPEN SPACE	33,500	0.002	67	3.44	230	0.01
AGRICULTURAL	8,575	0.006	51	3.44	175	0.02
	42,075		118		406	
SIMI VALLEY GA						
INSIDE SPHERE						
RES ESTATE	201	0.900	180	3.43	617	3.07
VERY LOW	909	2.000	1,818	3.43	6,236	6.86
LOW	299	2.600	777	3.43	2,665	8.91
MEDIUM	4,602	3.700	17,027	3.43	58,403	12.69
INTERMEDIATE	231	7.000	1,617	3.43	5,546	24.01
HIGH	157	15.000	2,355	3.43	8,078	51.45
VERY HIGH	10	25.000	250	3.43	858	85.75
MOBILE HOME	98	8.000	784	3.43	2,689	27.44
SANTA SUSANA	220	--	955	3.43	3,276	14.89
WEST SIMI	44	2.180	95	3.43	326	7.41
NORTH SIMI	55	4.360	239	3.43	820	14.90
OUTSIDE SPHERE						
OPEN SPACE	21,870	0.002	43	3.43	147	0.01
	28,696		26,140		89,660	
SIMI VALLEY NGA						
OPEN SPACE	21,660	0.002	43	2.49	107	0.00
BOX CANYON	68	--	134	2.49	334	4.91
	21,728		177		441	
THOUSAND OAKS GA						
INSIDE SPHERE						
VERY LOW	1,437	0.723	1,038	2.90	3,010	2.09
LOW	6,577	2.800	18,415	2.90	53,404	8.12
MEDIUM	1,366	5.600	7,649	2.90	22,182	16.24
HIGH	260	14.400	3,744	2.90	10,858	41.76
LYNN RANCH	399	--	802	2.90	2,326	5.83
CASA CONEJO	203	--	1,124	2.90	3,260	16.06
KELLY ESTATES	90	--	120	2.90	348	3.87
RURAL	325	1.000	335	2.90	972	2.90
OUTSIDE SPHERE						
LAKE SHERWOOD	130	--	0.001	2.90	2,903	22.33
OPEN SPACE	2,040	0.002	4	2.90	12	0.01
	12,837		34,232		99,273	
THOUSAND OAKS NGA						
OPEN SPACE	33,500	0.002	67	1.83	123	0.00
SOUTH COAST	35	--	262	1.83	479	13.70
	33,535		329		602	

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.2 (Cont'd)

1984 RESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	DU'S/AC	DU'S	POP/DU	POP	POP/ACRE
VENTURA GA						
INSIDE SPHERE						
SINGLE FAMILY	275	5.600	1,540	2.48	3,819	13.89
MULTI FAMILY	22	17.600	387	2.48	960	43.63
R-1-1AC	125	0.910	113	2.48	280	2.24
R-1-10	380	3.200	1,216	2.48	3,016	7.94
R-1-8	5	3.980	19	2.48	47	9.42
R-1-7	1515	4.800	7,272	2.48	18,035	11.90
R-1-6	1486	5.600	8,321	2.48	20,636	13.89
R-2	27	10.000	270	2.48	670	24.80
R-3	52	43.170	2,244	2.48	5,565	107.02
R-3-2	55	28.790	1,583	2.48	3,926	71.38
R-3-3	37	21.610	799	2.48	1,982	53.55
R-3-4	9	16.800	151	2.48	374	41.61
R-3-5	321	10.400	2,228	2.48	8,278	25.79
RPD-7U	14	7.000	98	2.48	243	17.36
RPD-10U	71	10.000	710	2.48	1,761	24.80
RPD-15U	17	15.000	255	2.48	632	37.20
RPD-16U	11	16.000	176	2.48	436	39.68
RPD-28U	0	28.000	0	2.48	0	0.00
PR-8	547	8.000	4,376	2.48	10,852	19.84
PR-15	116	15.000	1,740	2.48	4,315	37.20
PR-20	108	20.000	2,160	2.48	5,357	49.60
MF-36	30	28.790	863	2.48	2,140	71.34
HPR-4	51	4.000	204	2.48	506	9.92
HPR-6	85	6.000	510	2.48	1,265	14.88
HPR-8	43	8.000	344	2.48	853	19.84
HPR-15	42	15.000	630	2.48	1,562	37.20
HPR-20	116	20.000	2,320	2.48	5,754	49.60
TR-15	98	12.000	1,176	2.48	2,916	29.76
TR-20	153	16.000	2,448	2.48	6,071	39.68
SF-7U	0	5.600	0	2.48	0	0.00
CABRILLO VILL	20	--	115	2.48	285	14.26
SATICOY	52	--	274	2.48	680	13.07
MONTALVO	46	--	416	2.48	1,032	22.43
N VENTURA AVE	123	--	963	2.48	2,388	19.42
OUTSIDE SPHERE						
OPEN SPACE	17,320	0.002	34	2.48	84	0.00
AGRICULTURAL	3,010	0.006	18	2.48	45	0.01
RURAL	320	0.312	99	2.48	246	0.77
	26,702		47,182		117,011	

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.2 (Cont'd)

1984 RESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	DU'S/AC	DU'S	POP/DU	POP	POP/ACRE
VENTURA NGA						
OPEN SPACE	24,270	0.002	48	1.64	79	0.00
AGRICULTURAL	2,180	0.006	13	1.64	21	0.01
RURAL	62	0.312	19	1.64	31	0.50
NORTH COAST	68	--	1,541	1.64	2,527	37.17
	26,580		1,621		2,658	
VENTURA RIVER GA						
VERY LOW 1	219	0.024	5	2.65	13	0.06
VERY LOW 2	1,085	0.065	70	2.65	186	0.17
VERY LOW 3	121	0.128	15	2.65	40	0.33
LOW 1	447	0.269	120	2.65	318	0.71
LOW 2	515	0.636	327	2.65	867	1.68
LOW 3	368	1.040	382	2.65	1,012	2.75
MEDIUM 1	316	2.250	711	2.65	1,884	5.96
MEDIUM 2	443	3.920	1,736	2.65	4,600	10.38
HIGH	78	7.600	592	2.65	1,569	20.11
	3,592		3,958		10,489	
VENTURA RIVER NGA						
OPEN SPACE	3,045	0.002	6	2.67	16	0.00
RURAL	725	0.312	226	2.67	603	0.83
VERY LOW 1	3,300	0.024	79	2.67	211	0.06
VERY LOW 2	751	0.065	48	2.67	128	0.17
VERY LOW 3	139	0.128	17	2.67	45	0.33
LOW 1	143	0.269	38	2.67	101	0.71
LOW 2	93	0.636	59	2.67	158	1.69
LOW 3	141	1.040	146	2.67	390	2.76
HIGH	11	7.600	83	2.67	222	20.15
	8,348		702		1,874	
COUNTYWIDE TOTAL	494,686		207,919		601,012	

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.3

1984 NONRESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
CAMARILLO GA						
AGRICULTURAL	755	0.0	0	0.0	38	0.05
COMMERCIAL						
OFFICE	59	35.0	900	4.0	3,598	60.98
GENERAL	185	15.0	1,209	2.0	2,418	13.07
INDUSTRIAL						
GENERAL	370	20.0	3,223	2.0	6,447	17.42
IND/COM	2	20.0	17	2.0	35	17.42
R & D	5	20.0	44	2.0	87	17.42
PUBLIC						
SCHOOLS	148	10.0	645	1.0	645	4.36
TRANSIT CTRS	11	10.0	48	1.0	48	4.36
AIRPORT	640	1.0	279	1.0	279	0.44
CIVIC CENTER	4	20.0	35	4.0	139	34.85
HOSPITAL	9	40.0	157	3.0	470	52.27
SEMINARY	80	5.0	174	1.0	174	2.18
	2,268		6,730		14,378	
CAMARILLO NGA						
AGRICULTURAL	12,800	0.0	0	0.0	640	0.05
C-O	4	35.0	61	4.0	244	60.98
C-1	2	15.0	16	2.0	31	13.07
INDUSTRIAL	5	20.0	44	2.0	87	17.42
M-2	36	20.0	311	2.0	622	17.42
PUBLIC						
SCHOOLS	8	10.0	35	1.0	35	4.36
CAM ST HOSP	936	1.0	408	3.0	1,223	1.31
PUBLIC SVCS	3	10.0	13	3.0	39	13.07
	13,794		887		2,922	
FILLMORE GA						
AGRICULTURAL	400	0.0	0	0.0	20	0.05
COMMERCIAL						
ADMIN/PROF	7	35.0	107	4.0	427	60.98
HIGHWAY	21	15.0	137	2.0	274	13.07
CENTRAL BUS	28	25.0	305	2.0	610	21.78
INDUSTRIAL						
COM MFG	6	20.0	52	2.0	105	17.42
LIGHT MFG	45	20.0	392	2.0	784	17.42
GENERAL IND	58	20.0	505	2.0	1,011	17.42
PUBLIC						
SCHOOLS	44	10.0	192	1.0	192	4.36
CIVIC CENTER	5	20.0	44	4.0	174	34.85
	614		1,734		3,596	
FILLMORE NGA						
AGRICULTURAL	12,400	0.0	0	0.0	620	0.05
LAS POSAS NGA						
AGRICULTURAL	17,500	0.0	0	0.0	875	0.05
C-P-D	8	15.0	54	2.0	107	13.07
	17,508		54		982	

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.3 (Cont'd)

1984 NONRESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
MOORPARK GA						
AGRICULTURAL	4,718	0.0	0	0.0	236	0.05
COMMERCIAL						
NEIGHBORHOOD	2	15.0	13	2.0	26	13.07
GENERAL	27	15.0	176	2.0	353	13.07
COM/INDUST	0	20.0	0	2.0	0	0.00
INDUSTRIAL						
LIGHT	56	20.0	488	2.0	976	17.42
MEDIUM	75	20.0	653	2.0	1,307	17.42
PUBLIC						
SCHOOLS	37	10.0	161	1.0	161	4.36
MPK COLLEGE	103	5.0	224	1.0	224	2.18
PUB SVCS	4	10.0	17	3.0	52	13.07
	5,022		1,734		3,335	
MOORPARK NGA						
AGRICULTURAL	230	0.0	0	0.0	12	0.05
OAK PARK GA						
COMMERCIAL	6	15.0	39	2.0	78	13.07
PUBLIC						
SCHOOLS	91	10.0	396	1.0	396	4.36
PUB SVCS	4	10.0	17	3.0	52	13.07
	101		453		527	
OAK PARK NGA						
COMMERCIAL						
C-P-D	3	15.0	22	2.0	43	13.07
OJAI GA						
COMMERCIAL						
GENERAL	84	15.0	549	2.0	1,098	13.07
COM RECREA	190	1.0	83	0.5	41	0.22
INDUSTRIAL						
COM MFG	16	20.0	139	2.0	279	17.42
MFG PD	6	20.0	52	2.0	105	17.42
PUBLIC						
SCHOOLS	218	10.0	950	1.0	950	4.36
CITY HALL	2	20.0	17	3.0	52	26.14
HOSPITAL	1	40.0	17	3.0	52	52.27
PUB SVCS	2	10.0	9	3.0	26	13.07
	519		1,816		2,603	
OJAI NGA						
COMMERCIAL	2	15.0	13	2.0	26	13.07
INDUSTRIAL	7	20.0	61	2.0	122	17.42
PUBLIC						
SCHOOLS	443	1.0	193	1.0	193	0.44
	452		267		341	

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.3 (Cont'd)

1984 NONRESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
OXNARD GA						
AGRICULTURAL	5,023	0.0	0	0.0	251	0.05
COMMERCIAL						
TRUCK SALES	10	5.0	22	2.0	44	4.36
HWY RELATED	21	10.0	91	2.0	183	8.71
REG SHOP CTR	131	20.0	1,141	2.0	2,283	17.42
DIST SHOP CTR	23	15.0	150	2.0	301	13.07
CMTY SHOP CTR	18	15.0	118	2.0	235	13.07
CIVIC CENTER	163	20.0	1,420	4.0	5,680	34.85
SPEC SHOP	19	20.0	166	2.0	331	17.42
GENERAL	25	15.0	163	2.0	327	13.07
AUTO SALES	25	10.0	109	2.0	218	8.71
OFFICE/MOTEL	76	35.0	1,159	2.0	2,317	30.49
OFFICE	6	35.0	91	4.0	366	60.98
COM RECREA	2	1.0	1	0.5	0	0.22
HARBOR RELATD	3	15.0	20	2.0	39	13.07
CBD	44	20.0	383	2.0	767	17.42
C-C	5	50.0	115	1.0	115	21.78
C-1	30	15.0	196	2.0	392	13.07
INDUSTRIAL						
LIMITED	508	20.0	4,426	2.0	8,851	17.42
LIGHT	737	20.0	6,421	2.0	12,841	17.42
HEAVY	292	6.5	827	2.0	1,654	5.66
PUB UTILITY	479	1.0	209	2.0	417	.87
COM/IND	6	20.0	52	2.0	105	17.42
INDUSTRIAL	174	20.0	1,516	2.0	3,032	17.42
PUBLIC						
SCHOOLS	349	10.0	1,520	1.0	1,520	4.36
OX COLLEGE	102	5.0	222	1.0	222	2.18
AIRPORT	177	1.0	77	4.0	308	1.74
HOSPITALS	19	40.0	331	3.0	993	52.27
PUBLIC SVCS	16	10.0	70	3.0	209	13.07
CITY HALL	6	20.0	52	3.0	157	26.14
TRANSP CTR	10	10.0	44	1.0	44	4.36
COMMUNITY CTR	23	10.0	100	1.0	100	4.36
	8,522		21,212		44,303	
OXNARD NGA						
AGRICULTURAL	12,573	0.0	0	0.0	629	0.05
POINT MUGU	4,163	3.0	5,440	2.0	10,880	2.61
	16,736		5,440		11,509	
PIRU GA						
AGRICULTURAL	1,300	0.0	0	0.0	65	0.05
COMMERCIAL	8	15.0	52	2.0	105	13.07
INDUSTRIAL	12	20.0	105	2.0	209	17.42
PUBLIC	21	10.0	91	1.0	91	4.36
	1,341		248		470	
PIRU NGA						
AGRICULTURAL	3,975	0.0	0	0.0	199	0.05

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.3 (Cont'd)

1984 NONRESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
PORT HUENEME GA						
CBC BASE						
COMMERCIAL	176	15.0	1,150	2.0	2,300	13.07
INDUSTRIAL	97	20.0	845	2.0	1,690	17.42
PUBLIC	772	10.0	3,363	3.0	10,088	13.07
CITY						
COMMERCIAL						
NEIGH/GEN	11	15.0	72	2.0	144	13.07
VISIT SERV	37	15.0	242	2.0	484	13.07
INDUSTRIAL						
COAST DEP	20	20.0	174	2.0	348	17.42
COAST REL	24	20.0	209	2.0	418	17.42
PUBLIC						
SCHOOLS	32	10.0	139	1.0	139	4.36
PUB SVCS	7	10.0	30	3.0	91	13.07
	1,176		6,225		15,703	
SANTA PAULA GA						
AGRICULTURAL	2,575	0.0	0	0.0	129	0.05
COMMERCIAL						
OFFICE	8	35.0	122	4.0	488	60.98
GENERAL	105	15.0	686	2.0	1,372	13.07
NEIGHBORHOOD	4	15.0	26	2.0	52	13.07
C-P-D	3	15.0	21	2.0	42	13.07
INDUSTRIAL						
LIGHT	106	20.0	923	2.0	1,847	17.42
HEAVY	58	6.5	164	2.0	328	5.66
IND PARK	82	20.0	714	2.0	1,429	17.42
SEWAGE DISP	6	6.5	17	2.0	34	5.66
M-2	26	20.0	227	2.0	453	17.42
PUBLIC						
SCHOOLS	52	10.0	227	1.0	227	4.36
CITY HALL	1	20.0	9	3.0	26	26.14
PUB SVCS	1	10.0	4	3.0	13	13.07
AIRPORT	38	1.0	17	0.5	8	0.22
HOSPITAL	8	40.0	139	2.0	418	52.27
	3,073		3,297		6,867	
SANTA PAULA NGA						
AGRICULTURAL	8,575	0.0	0	0.0	429	0.05
INDUSTRIAL						
LIGHT MFG	7	20.0	61	2.0	122	17.42
HEAVY IND	36	6.5	102	2.0	204	5.66
M-3	91	6.5	258	2.0	516	5.66
T AQUINAS COLL	19	1.0	8	4.0	33	1.74
	8,728		429		1,304	

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.3 (Cont'd)

1984 NONRESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
SIMI VALLEY GA						
COMMERCIAL						
RECREA COM	460	1.0	200	0.5	100	0.22
OFFICE	26	35.0	396	4.0	1,586	60.98
GENERAL	146	15.0	954	2.0	1,908	13.07
DISTRICT	232	15.0	1,516	2.0	3,032	13.07
REG CENTER	55	20.0	479	2.0	958	17.42
C-P-D	9	15.0	58	2.0	116	13.07
INDUSTRIAL						
LIGHT	336	40.0	5,854	2.0	11,709	34.85
BUSINESS PARK	0	40.0	0	4.0	0	0.00
INDUS RESERVE	0	40.0	0	2.0	0	0.00
PUBLIC						
CIVIC CENTER	19	20.0	166	3.0	497	26.14
PUBLIC SVCS	69	10.0	301	2.0	601	8.71
HOSPITAL	0	40.0	0	3.0	0	0.00
SCHOOLS	468	10.0	2,039	1.0	2,039	4.36
BRANDEIS INST	2,567	0.1	112	1.0	112	0.04
AIRPORT	0	1.0	0	0.5	0	0.00
RR DEPOT	0	10.0	0	1.0	0	0.00
LAW ENF OFFC	0	40.0	0	6.0	0	0.00
	4,387		12,075		22,657	
SIMI VALLEY NGA						
ROCKETDYNE	1,571	1.0	684	2.0	1,369	0.87
THOUSAND OAKS GA						
COMMERCIAL						
GENERAL	784	15.0	5,123	2.0	10,245	13.07
COM/INDUS	11	10.0	48	4.0	192	17.42
INDUSTRIAL						
CITY	496	20.0	4,321	2.0	8,642	17.42
M-1	347	20.0	3,023	2.0	6,046	17.42
PUBLIC						
SCHOOLS	283	10.0	1,233	1.0	1,233	4.36
CAL LUTHERAN	157	5.0	342	1.0	342	2.18
NEWB PK ACAD	65	5.0	142	1.0	142	2.18
INSTITUTNL	48	1.0	21	3.0	63	1.31
CIVIC CTR	13	20.0	113	3.0	340	26.14
	2,204		14,365		27,244	
THOUSAND OAKS NGA						
COMMERCIAL	6	15.0	39	2.0	78	13.07
C-C	5	50.0	109	1.0	109	21.78
	11		148		187	

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.3 (Cont'd)

1984 NONRESIDENTIAL DEVELOPMENT

DESIGNATION	ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
VENTURA GA						
AGRICULTURAL	3,010	0.0	0	0.0	151	0.05
COMMERCIAL						
PROF OFFICE	48	35.0	732	4.0	2,927	60.98
GENERAL	292	15.0	1,908	2.0	3,816	13.07
NEIGHBORHOOD	79	15.0	516	2.0	1,032	13.07
PLANNED COM	138	15.0	902	2.0	1,803	13.07
PC-TOURIST	28	15.0	183	2.0	366	13.07
PMXD	88	15.0	575	2.0	1,150	13.07
HARBOR COM	114	15.0	745	2.0	1,490	13.07
COMMERCIAL	14	15.0	91	2.0	183	13.07
C-P-D	2	15.0	13	2.0	26	13.07
INDUSTRIAL						
GENERAL	523	20.0	4,556	2.0	9,113	17.42
PLANNED DEV	315	20.0	2,744	2.0	5,489	17.42
INDUSTRIAL	92	20.0	802	2.0	1,603	17.42
INDUSTRIAL (N.COAST)	205	4.0	357	2.0	714	3.48
OIL FIELD	173	1.0	75	2.0	151	0.87
M-3	10	20.0	85	2.0	169	17.42
PUBLIC						
SCHOOLS	140	10.0	610	1.0	610	4.36
GOVT CENTER	73	20.0	636	3.0	1,908	26.14
PUBLIC SVCS	4	10.0	17	3.0	52	13.07
CITY HALL	8	20.0	70	3.0	209	26.14
HOSPITAL	14	40.0	244	3.0	732	52.27
VENTURA COLL	55	10.0	240	2.0	479	8.71
CAL STATE U	0	10.0	0	2.0	0	0.00
PUBLIC	1	15.0	7	2.0	13	13.07
	5,426		16,107		34,186	
VENTURA NGA						
AGRICULTURAL	2,180	0.0	0	0.0	109	0.05
COMMERCIAL						
C-C	1	50.0	13	1.0	13	21.78
INDUSTRIAL						
C-M	351	1.5	229	2.0	459	1.31
PUBLIC SERVICE	3	10.0	13	3.0	39	13.07
	2,535		255		620	
VENTURA RIVER GA						
COMMERCIAL	38	15.0	248	2.0	497	13.07
INDUSTRIAL	7	20.0	61	2.0	122	17.42
PUBLIC						
SCHOOLS	18	10.0	78	1.0	78	4.36
VILLANOVA SC	96	0.5	21	4.0	84	0.87
HONOR FARM	127	1.0	55	2.0	111	0.87
	286		464		891	

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.3 (Cont'd)

1984 NONRESIDENTIAL DEVELOPMENT

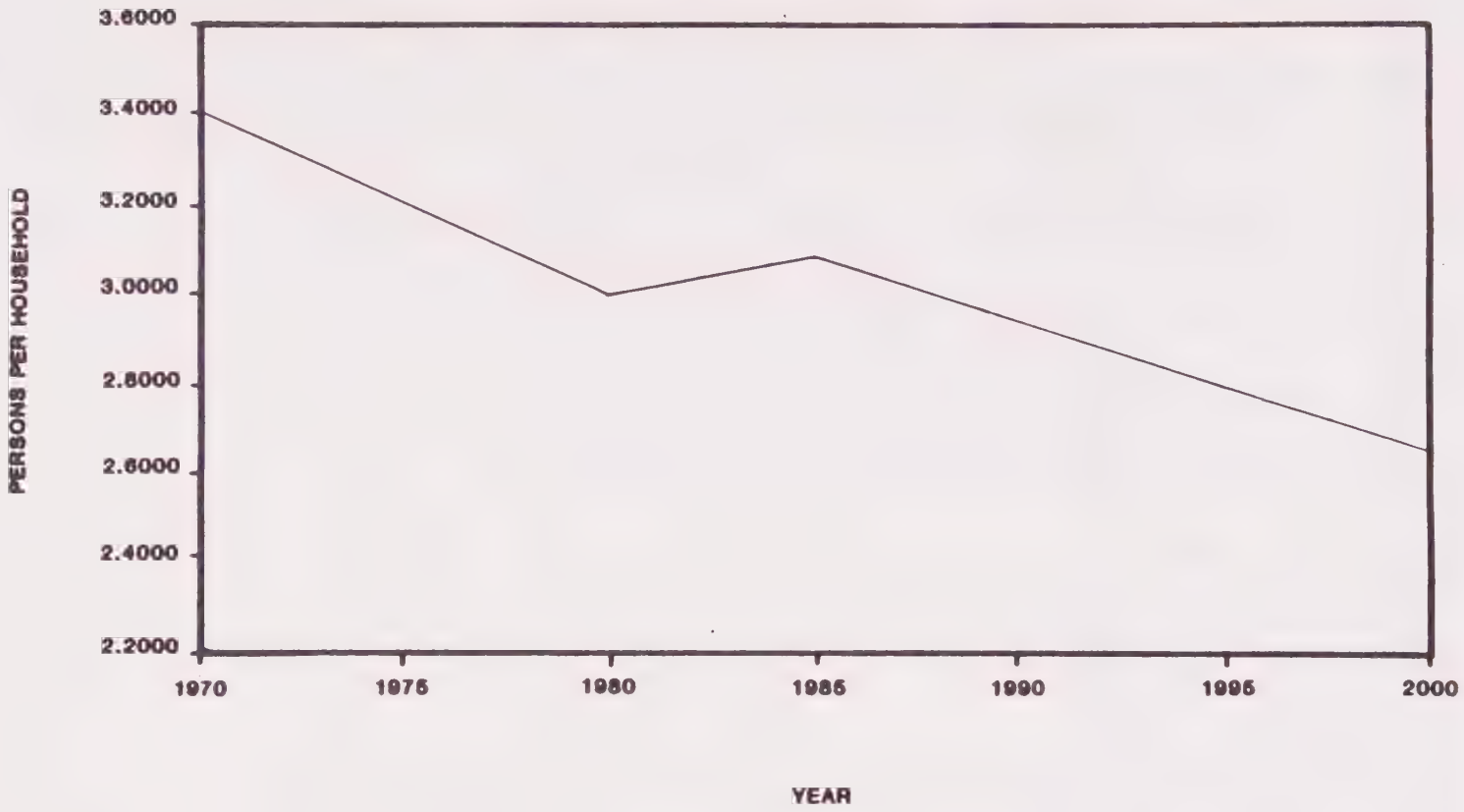
DESIGNATION	ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
VENTURA RIVER NGA						
COMMERCIAL	6	15.0	39	2.0	78	13.07
INDUSTRIAL	1	20.0	9	2.0	17	17.42
PUBLIC-SCHOOL	8	10.0	35	1.0	35	4.36
	15		83		131	
NORTH HALF NGA						
COMMERCIAL	2	15.0	13	2.0	26	13.07
INDUSTRIAL	500	0.1	22	2.0	44	0.09
PUBLIC SVCS	80	1.0	35	3.0	105	1.31
	582		70		174	
COUNTYWIDE TOTAL	113,479		94,799		197,173	

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

VENTURA COUNTY

AVERAGE NUMBER OF PERSONS PER HOUSEHOLD: 1970-2000



1970 P/HH IS FROM CENSUS.

1975, 1980 AND 1984 P/HH ARE ESTIMATES.

1985-2000 P/HH ARE PROJECTIONS.

VENTURA COUNTY GENERAL PLAN
LAND USE APPENDIX-FIGURE 3.2.4

FIGURE 3.2.5

RESIDENTIAL HOLDING CAPACITY

LAND USE DESIGNATION	GENERAL PLAN ACRES	LOW RANGE DU/AC	HIGH RANGE DU/AC	LOW RANGE DU'S	HIGH RANGE DU'S	YEAR 2000 POP/DU	LOW RANGE POP	HIGH RANGE POP	LOW RANGE POP/AC	HIGH RANGE POP/AC
CAMARILLO GA										
INSIDE SPHERE										
AGRICULTURAL	373	0.02	0.02	6	6	2.52	15	15	0.04	0.04
RURAL	2,493	1.50	1.50	3,739	3,739	2.52	9,422	9,422	3.78	3.78
LOW	2,431	3.50	5.00	8,508	12,155	2.52	21,440	30,631	8.82	12.60
LOW-MEDIUM	724	7.00	10.00	5,068	7,240	2.52	12,771	18,245	17.64	25.20
MEDIUM	83	15.00	18.00	1,245	1,494	2.52	3,137	3,765	37.80	45.36
HIGH	152	25.00	30.00	3,800	4,560	2.52	9,576	11,491	63.00	75.60
MOBILE HOME	404	7.00	7.00	2,828	2,828	2.52	7,127	7,127	17.64	17.64
LAS POSAS EST	359	----	----	684	684	2.52	1,724	1,724	4.80	4.80
CAMARILLO HTS	336	----	----	1,195	1,195	2.52	3,011	3,011	8.96	8.96
STACY/TERRA										
BELLA LANES	23	2.18	2.18	50	50	2.52	126	126	5.48	5.48
OUTSIDE SPHERE										
OPEN SPACE	2,340	0 .01	0.10	23	234	2.52	58	590	0.02	0.25
AGRICULTURAL	382	0 .00	0.03	0	9	2.52	0	23	0.00	0.06
	10,100			27,146	34,194		68,408	86,169		
CAMARILLO NGA										
OPEN SPACE	4,300	0.01	0.10	43	430	3.11	134	1,337	0.03	0.31
AGRICULTURAL	12,800	0.00	0.03	20	320	3.11	62	995	0.00	0.08
RURAL	980	0.20	1.00	196	980	3.11	610	3,048	0.62	3.11
INSTITUTIONAL	50	7.80	7.80	390	390	3.11	1,213	1,213	24.26	24.26
	18,130			649	2,120		2,019	6,593		
FILLMORE GA										
INSIDE SPHERE										
ESTATE	106	0.75	0.75	79	79	2.83	224	224	2.11	2.11
LOW	422	2.00	6.00	844	2,532	2.83	2,389	7,166	5.66	16.98
MEDIUM	294	7.00	14.00	2,058	4,116	2.83	5,824	11,648	19.81	39.62
HIGH	2	15.00	20.00	30	40	2.83	85	113	42.45	56.60
OUTSIDE SPHERE										
OPEN SPACE	600	0.01	0.10	6	60	2.83	17	170	0.03	0.28
AGRICULTURAL	400	0.00	0.03	0	10	2.83	0	28	0.00	0.07
	1,824			3,017	6,837		8,539	19,349		

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

Figure 3.2.5 (Cont'd)

RESIDENTIAL HOLDING CAPACITY

LAND USE DESIGNATION	GENERAL PLAN ACRES	LOW RANGE DU/AC	HIGH RANGE DU/AC	LOW RANGE DU'S	HIGH RANGE DU'S	YEAR 2000 POP/DU	LOW RANGE POP	HIGH RANGE POP	LOW RANGE POP/AC	HIGH RANGE POP/AC
FILLMORE NGA										
OPEN SPACE	29,300	0.01	0.10	293	2,930	2.72	797	7,970	0.03	0.27
AGRICULTURAL	12,400	0.00	0.03	19	310	2.72	52	843	0.00	0.07
	41,700			312	3,240		849	8,813		
LAS POSAS NGA										
OPEN SPACE	8,525	0.01	0.10	85	852	3.24	275	2,760	0.03	0.32
AGRICULTURAL	17,500	0.00	0.03	27	437	3.24	87	1,416	0.00	0.08
RURAL	1,094	0.20	1.00	218	1,094	3.24	706	3,545	0.65	3.24
SOMIS	49	----	----	275	275	3.24	891	891	18.18	18.18
SATICOY C CLUB	19	2.18	2.18	41	41	3.24	133	133	6.99	6.99
	27,187			646	2,699		2,092	8,745		
MOORPARK CA										
INSIDE SPHERE										
RURAL LOW	1,697	0.20	0.20	339	339	2.91	986	986	0.58	0.58
RURAL HIGH	384	1.00	1.00	384	384	2.91	1,117	1,117	2.91	2.91
LOW	860	1.10	2.00	946	1,720	2.91	2,753	5,005	3.20	5.82
MEDIUM LOW	1,011	2.10	3.00	2,123	3,033	2.91	6,178	8,826	6.11	8.73
MEDIUM	1,090	3.10	5.00	3,379	5,450	2.91	9,833	15,860	9.02	14.55
HIGH	92	5.10	10.00	469	920	2.91	1,365	2,677	14.83	29.10
VERY HIGH	90	10.10	20.00	909	1,800	2.91	2,645	5,238	29.39	58.20
AGRICULTURAL 1	396	0.10	0.03	39	9	2.91	113	26	0.29	0.07
OPEN SPACE 1	459	0.10	0.03	45	11	2.91	131	32	0.29	0.07
OPEN SPACE 2	649	0.03	0.03	16	16	2.91	47	47	0.07	0.07
OUTSIDE SPHERE										
OPEN SPACE	8,200	0.01	0.10	82	820	2.91	239	2,386	0.03	0.29
AGRICULTURAL	4,322	0.00	0.03	6	108	2.91	17	314	0.00	0.07
RURAL	80	0.20	1.00	16	80	2.91	47	233	0.58	2.91
HOME ACRES	161	2.18	2.18	350	350	2.91	1,019	1,019	6.33	6.33
	19,491			9,103	15,040		26,491	43,766		
MOORPARK NGA										
OPEN SPACE	7,070	0.01	0.10	70	707	2.38	167	1,683	0.02	0.24
AGRICULTURAL	230	0.00	0.03	0	5	2.38	0	12	0.00	0.05
HIGH (CITY PLAN)	29	5.10	10.00	147	290	2.38	350	690	12.06	23.80
	7,329			217	1,002		517	2,385		

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

Figure 3.2.5 (Cont'd)

RESIDENTIAL HOLDING CAPACITY

LAND USE DESIGNATION	GENERAL PLAN ACRES	LOW RANGE DU/AC	HIGH RANGE DU/AC	LOW RANGE DU'S	HIGH RANGE DU'S	YEAR 2000 POP/DU	LOW RANGE POP	HIGH RANGE POP	LOW RANGE POP/AC	HIGH RANGE POP/AC
NORTH HALF NGA										
OPEN SPACE	60,647	0.01	0.10	606	6,065	1.63	988	9,886	0.02	0.16
RURAL	1,204	0.20	1.00	240	1,204	1.63	391	1,963	0.32	1.63
	61,851			846	7,269		1,379	11,849		
OAK PARK GA										
OPEN SPACE	3,354	0.00	0.00	0	0	2.99	0	0	0.00	0.00
RES 1-2	6	1.00	2.00	5	11	2.99	15	33	2.67	5.87
RES 2-4	23	2.00	4.00	46	92	2.99	138	275	5.93	11.86
RES 4-6	511	4.00	6.00	2,043	3,064	2.99	6,109	9,161	11.96	17.94
RES 6-8	38	6.00	8.00	226	302	2.99	676	903	17.88	23.89
RES 8-12	321	8.00	12.00	2,564	3,846	2.99	7,666	11,500	23.92	35.88
RES 16-20	23	16.00	20.00	371	464	2.99	1,109	1,387	47.81	59.80
	4,275			5,255	7,779		15,712	23,259		
OAK PARK NGA										
OPEN SPACE	7,785	0.01	0.10	77	778	2.69	207	2,093	0.03	0.27
RURAL	810	0.20	1.00	162	810	2.69	436	2,179	0.54	2.69
BELL CANYON	208	----	----	453	453	2.69	1,219	1,219	5.86	5.86
	8,803			692	2,041		1,861	5,490		
OJAI GA										
INSIDE SPHERE										
VERY LOW	245	0.50	0.50	122	122	2.39	292	292	1.19	1.19
LOW	570	1.00	2.00	570	1,140	2.39	1,362	2,725	2.39	4.78
MEDIUM	395	3.00	4.00	1,185	1,580	2.39	2,832	3,776	7.17	9.56
MEDIUM HIGH	83	6.00	7.50	498	622	2.39	1,190	1,487	14.34	17.91
HIGH	30	8.00	15.00	240	450	2.39	574	1,076	19.12	35.85
SPECIAL HOUSING	10	12.00	20.00	120	200	2.39	287	478	28.68	47.80
VERY LOW 1	148	0.03	0.05	4	7	2.39	10	17	0.06	0.11
VERY LOW 2	257	0.05	0.10	12	25	2.39	29	60	0.11	0.23
VERY LOW 3	115	0.10	0.20	11	23	2.39	26	55	0.23	0.48
LOW 1	326	0.20	0.50	65	163	2.39	155	390	0.48	1.20
LOW 2	7	0.50	1.00	3	7	2.39	7	17	1.02	2.39
LOW 3	65	1.00	2.00	65	130	2.39	155	311	2.39	4.78
MEDIUM 1	47	2.00	4.00	94	188	2.39	225	449	4.78	9.56

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Figure 3.2.5 (Cont'd)

RESIDENTIAL HOLDING CAPACITY

LAND USE DESIGNATION	GENERAL PLAN ACRES	LOW RANGE DU/AC	HIGH RANGE DU/AC	LOW RANGE DU'S	HIGH RANGE DU'S	YEAR 2000 POP/DU	LOW RANGE POP	HIGH RANGE POP	LOW RANGE POP/AC	HIGH RANGE POP/AC
(OJAI GA Cont'd)										
OUTSIDE SPHERE	401	0.01	0.10	4	40	2.39	10	96	0.02	0.24
OPEN SPACE	556	0.03	0.05	13	27	2.39	31	65	0.06	0.12
VERY LOW 1	188	0.05	0.10	9	18	2.39	22	43	0.11	0.23
VERY LOW 2	50	0.20	0.50	10	25	2.39	24	60	0.48	1.20
LOW 1	66	0.50	1.00	33	66	2.39	79	158	1.20	2.39
LOW 2	23	6.00	15.00	138	345	2.39	330	825	14.34	35.85
HIGH	3,582			3,196	5,178		7,638	12,375		
OJAI NGA										
INSIDE SPHERE										
OPEN SPACE	401	0.01	0.10	4	40	2.51	10	100	0.03	0.25
VERY LOW 1	422	0.03	0.05	12	21	2.51	30	53	0.07	0.12
VERY LOW 2	195	0.05	0.10	9	19	2.51	23	48	0.12	0.24
LOW 1	17	0.20	0.50	3	8	2.51	8	20	0.44	1.18
LOW 2	49	0.50	1.00	24	49	2.51	60	123	1.23	2.51
OUTSIDE SPHERE										
OPEN SPACE	15,808	0.01	0.10	158	1,580	2.51	397	3,966	0.03	0.25
RURAL	1,327	0.20	1.00	265	1,327	2.51	665	3,331	0.50	2.51
VERY LOW 1	6,781	0.03	0.05	169	339	2.51	424	851	0.06	0.13
VERY LOW 2	1,722	0.05	0.10	86	172	2.51	216	432	0.13	0.25
LOW 1	966	0.20	0.50	193	483	2.51	484	1,212	0.50	1.26
LOW 2	66	0.50	1.00	33	66	2.51	83	166	1.26	2.51
	26,670			904	3,967		2,269	9,958		
OXNARD GA										
INSIDE SPHERE										
AGRICULTURAL	2,313	0.00	0.03	4	69	2.76	11	190	0.00	0.08
OPEN SPACE	519	0.01	1.00	5	52	2.76	14	144	0.03	0.28
LOW	3,854	1.00	5.90	3,854	22,738	2.76	10,637	62,757	2.76	16.28
MEDIUM	2,328	6.00	7.90	13,968	18,391	2.76	38,552	50,759	16.56	21.80
HIGH	1,714	8.00	11.90	13,712	20,396	2.76	37,845	56,293	22.08	32.84
VERY HIGH	520	12.00	15.00	6,240	7,800	2.76	17,222	21,528	33.12	41.40
EL RIO PLAN	554	----	----	2,722	2,722	2.76	7,513	7,513	13.56	13.56
CEN COAST PLAN	118	29.04	29.04	3,426	3,426	2.76	9,456	9,456	80.13	80.13
OUTSIDE SPHERE										
OPEN SPACE	2,243	0.01	0.10	22	224	2.76	61	618	0.03	0.28
AGRICULTURAL	2,710	0.00	0.03	4	67	2.76	11	185	0.00	0.07
	16,873			43,957	75,885		121,322	209,443		

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Figure 3.2.5 (Cont'd)

RESIDENTIAL HOLDING CAPACITY

LAND USE DESIGNATION	GENERAL PLAN ACRES	LOW RANGE DU/AC	HIGH RANGE DU/AC	LOW RANGE DU'S	HIGH RANGE DU'S	YEAR 2000 POP/DU	LOW RANGE POP	HIGH RANGE POP	LOW RANGE POP/AC	HIGH RANGE POP/AC
OXNARD NGA										
INSIDE SPHERE										
MEDIUM	75	6.00	7.90	451	594	3.38	1,524	2,008	20.24	26.66
HIGH	29	8.00	11.90	229	341	3.38	774	1,153	26.97	40.16
OUTSIDE SPHERE										
OPEN SPACE	4,228	0.01	0.10	42	422	3.38	142	1,426	0.03	0.34
AGRICULTURAL	12,573	0.00	0.03	19	314	3.38	64	1,061	0.01	0.08
POINT MUGU	200	2.85	2.85	570	570	3.38	1,927	1,927	9.63	9.63
	17,105			1,311	2,241		4,431	7,574		
PIRU GA										
RES 2-4	10	2.00	4.00	20	40	3.18	64	127	6.36	12.72
RES 4-6	95	4.00	6.00	380	570	3.18	1,208	1,813	12.72	19.08
RES 10-15	6	10.00	15.00	60	90	3.18	191	286	31.80	47.70
OPEN SPACE	1,253	0.01	0.10	12	125	3.18	38	398	0.03	0.32
AGRICULTURAL	1,300	0.00	0.03	2	32	3.18	6	102	0.00	0.08
	2,664			474	857		1,507	2,725		
PIRU NGA										
OPEN SPACE	36,300	0.01	0.10	363	3,630	2.80	1,016	10,164	0.03	0.28
AGRICULTURAL	3,975	0.00	0.03	6	99	2.80	17	277	0.00	0.07
	40,275			369	3,729		1,033	10,441		
PORT HUENEME GA										
LOW	447	3.50	7.00	1,564	3,129	2.49	3,894	7,791	8.71	17.43
MEDIUM	276	8.00	15.00	2,208	4,140	2.49	5,498	10,309	19.92	37.35
HIGH	98	16.00	25.00	1,568	2,450	2.49	3,904	6,101	39.84	62.25
CBC BASE	370	3.50	3.50	1,295	1,295	2.49	3,225	3,225	8.72	8.72
	1,191			6,635	11,014		16,521	27,425		

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

Figure 3.2.5 (Cont'd)

RESIDENTIAL HOLDING CAPACITY

LAND USE DESIGNATION	GENERAL PLAN ACRES	LOW RANGE DU/AC	HIGH RANGE DU/AC	LOW RANGE DU'S	HIGH RANGE DU'S	YEAR 2000 POP/DU	LOW RANGE POP	HIGH RANGE POP	LOW RANGE POP/AC	HIGH RANGE POP/AC
SANTA PAULA GA										
INSIDE SPHERE										
SINGLE FAMILY	399	3.50	7.00	1,396	2,793	2.65	3,699	7,401	9.27	18.55
MEDIUM	103	7.10	15.00	731	1,545	2.65	1,937	4,094	18.81	39.75
MEDIUM HIGH	302	12.00	21.00	3,624	6,342	2.65	9,604	16,806	31.80	55.65
HIGH	25	15.00	29.00	375	725	2.65	994	1,921	39.75	76.85
HILLSIDE	251	0.50	4.00	125	1,004	2.65	331	2,661	1.32	10.60
S PAULA WEST	6	7.26	7.26	43	43	2.65	114	114	18.99	18.99
S PAULA EAST	7	0.20	1.00	1	7	2.65	3	19	0.38	2.65
OUTSIDE SPHERE										
OPEN SPACE	300	0.01	0.10	3	30	2.65	8	80	0.03	0.27
AGRICULTURAL	2,575	0.00	0.03	4	64	2.65	11	170	0.00	0.07
	3,968			6,302	12,553		16,700	33,265		
SANTA PAULA NGA										
OPEN SPACE	33,500	0.01	0.10	335	3,350	3.04	1,018	10,184	0.03	0.30
AGRICULTURAL	8,500	0.00	0.03	13	212	3.04	40	644	0.00	0.08
	42,000			348	3,562		1,058	10,828		
SIMI VALLEY GA										
INSIDE SPHERE										
RES ESTATE	499	1.00	1.00	499	499	3.03	1,512	1,512	3.03	3.03
VERY LOW	1,417	2.18	2.18	3,089	3,089	3.03	9,360	9,360	6.61	6.61
LOW	1,570	3.00	3.00	4,710	4,710	3.03	14,271	14,271	9.09	9.09
MEDIUM	5,944	3.10	5.00	18,426	29,720	3.03	55,831	90,052	9.39	15.15
INTERMEDIATE	806	5.10	10.00	4,110	8,060	3.03	12,453	24,422	15.45	30.30
HIGH	593	10.10	18.00	5,989	10,674	3.03	18,147	32,342	30.60	54.54
VERY HIGH	80	18.10	25.00	1,448	2,000	3.03	4,387	6,060	54.84	75.75
MOBILE HOME	113	5.10	12.00	576	1,356	3.03	1,745	4,109	15.44	36.36
SANTA SUSANA	220	----	----	955	955	3.03	2,894	2,894	13.15	13.15
WEST SIMI	44	2.18	2.18	95	95	3.03	288	288	6.54	6.54
NORTH SIMI	55	4.36	4.36	239	239	3.03	724	724	13.17	13.17
OUTSIDE SPHERE										
OPEN SPACE	21,542	0.01	0.10	214	2,145	3.03	648	6,499	0.03	0.30
RURAL	328	0.20	1.00	65	328	3.03	106	994	0.32	3.03
	33,211			40,415	63,870		122,366	193,526		

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

Figure 3.2.5 (Cont'd)

RESIDENTIAL HOLDING CAPACITY

LAND USE DESIGNATION	GENERAL PLAN ACRES	LOW RANGE DU/AC	HIGH RANGE DU/AC	LOW RANGE DU'S	HIGH RANGE DU'S	YEAR 2000 POP/DU	LOW RANGE POP	HIGH RANGE POP	LOW RANGE POP/AC	HIGH RANGE POP/AC
SIMI VALLEY NGA										
OPEN SPACE	21,660	0.01	0.10	216	2,166	2.31	499	5,003	0.02	0.23
BOX CANYON	68	----	----	134	279	2.31	310	644	4.55	9.48
	21,728			350	2,445		808	5,648		
THOUSAND OAKS GA										
INSIDE SPHERE										
VERY LOW	5,505	0.75	2.00	4,128	11,010	2.64	10,898	29,066	1.98	5.28
LOW	7,919	2.00	4.50	15,838	35,635	2.64	41,812	94,076	5.28	11.88
MEDIUM	2,006	4.50	15.00	9,027	30,090	2.64	23,831	79,438	11.88	39.60
HIGH	483	15.00	30.00	7,245	14,490	2.64	19,127	38,254	39.60	79.20
LYNN RANCH	399	----	----	802	895	2.64	2,117	2,363	5.31	5.92
CASA CONEJO	203	----	----	1,124	1,456	2.64	2,967	3,844	14.62	18.94
KELLY ESTATES	90	----	----	120	131	2.64	317	346	3.52	3.84
RURAL	335	0.20	1.00	67	335	2.64	177	884	0.53	2.64
OUTSIDE SPHERE										
LAKE SHERWOOD	793	----	----	712	1,276	2.64	1,880	3,369	2.37	4.25
OPEN SPACE	1,510	0.01	0.10	15	151	2.64	40	339	0.03	0.26
	19,243			39,078	95,469		103,166	252,038		
THOUSAND OAKS GA										
OPEN SPACE	33,439	0.01	0.10	334	3,344	1.82	608	6,086	0.02	0.18
RURAL	61	0.20	1.00	12	61	1.82	22	111	0.36	1.82
SOUTH COAST	35	----	----	262	262	1.82	477	477	13.62	13.62
	33,535			608	3,667		1,107	6,674		

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Ventura County General Plan
Land Use Appendix

Figure 3.2.5 (Cont'd)

RESIDENTIAL HOLDING CAPACITY

LAND USE DESIGNATION	GENERAL PLAN ACRES	LOW RANGE DU/AC	HIGH RANGE DU/AC	LOW RANGE DU'S	HIGH RANGE DU'S	YEAR 2000 POP/DU	LOW RANGE POP	HIGH RANGE POP	LOW RANGE POP/AC	HIGH RANGE POP/AC
VENTURA GA										
INSIDE SPHERE										
SINGLE FAMILY	275	1.00	7.00	275	1,925	2.48	682	4,774	2.48	17.36
MULTIFAMILY	22	22.00	22.00	484	484	2.48	1,200	1,200	54.56	54.56
R-1-1AC	125	1.00	1.00	125	125	2.48	310	310	2.48	2.48
R-1-10	380	4.00	4.00	1,520	1,520	2.48	3,770	3,770	9.92	9.92
R-1-8	5	5.00	5.00	25	25	2.48	62	62	12.40	12.40
R-1-7	1,570	6.00	6.00	9,420	9,420	2.48	23,362	23,362	14.88	14.88
R-1-6	1,657	7.00	7.00	11,599	11,599	2.48	28,766	28,766	17.36	17.36
R-2	27	12.50	12.50	337	337	2.48	836	836	30.95	30.95
R-3	52	54.00	54.00	2,808	2,808	2.48	6,964	6,964	133.92	133.92
R-3-2	55	36.00	36.00	1,980	1,980	2.48	4,910	4,910	89.28	89.28
R-3-3	37	27.00	27.00	999	999	2.48	2,478	2,478	66.96	66.96
R-3-4	9	21.00	21.00	189	189	2.48	469	469	52.08	52.08
R-3-5	321	18.00	18.00	5,778	5,778	2.48	14,329	14,329	44.64	44.64
RPD-7U	14	7.00	7.00	98	98	2.48	243	243	17.36	17.36
RPD-10U	71	10.00	10.00	710	710	2.48	1,761	1,761	24.80	24.80
RPD-15U	17	15.00	15.00	255	255	2.48	632	632	37.20	37.20
RPD-16U	11	16.00	16.00	176	176	2.48	436	436	39.68	39.68
RPD-28U	15	28.00	28.00	420	420	2.48	1,042	1,042	69.44	69.44
PR-8	782	8.00	8.00	6,256	6,256	2.48	15,515	15,515	19.84	19.84
PR-15	209	15.00	15.00	3,135	3,135	2.48	7,775	7,775	37.20	37.20
PR-20	273	20.00	20.00	5,460	5,460	2.48	13,541	13,541	49.60	49.60
MF-36	30	36.00	36.00	1,080	1,080	2.48	2,678	2,678	89.28	89.28
HPR-4	1,229	4.00	4.00	4,916	4,916	2.48	12,192	12,192	9.92	9.92
HPR-6	133	6.00	6.00	798	798	2.48	1,979	1,979	14.88	14.88
HPR-8	333	8.00	8.00	2,664	2,664	2.48	6,607	6,607	19.84	19.84
HPR-15	42	15.00	15.00	630	630	2.48	1,562	1,562	37.20	37.20
HPR-20	116	20.00	20.00	2,320	2,320	2.48	5,754	5,754	49.60	49.60
TR-15	98	12.00	12.00	1,176	1,176	2.48	2,916	2,916	29.76	29.76
TR-20	153	16.00	16.00	2,448	2,448	2.48	6,071	6,071	39.68	39.68
SF-7U	92	7.00	7.00	644	644	2.48	1,597	1,597	17.36	17.36
CABRILLO VIL	20	----	----	115	115	2.48	285	285	14.26	14.26
SATICOY	52	----	----	274	274	2.48	680	680	13.07	13.07
MONTALVO	46	----	----	416	416	2.48	1,032	1,032	22.43	22.43
N VENTURA AVE	123	----	----	963	963	2.48	2,388	2,388	19.42	19.42
OUTSIDE SPHERE										
OPEN SPACE	17,320	0.01	0.10	108	1,732	2.48	268	4,295	0.02	0.25
AGRICULTURAL	3,010	0.00	0.03	4	75	2.48	10	186	0.00	0.06
RURAL (COUNTY)	320	1.00	1.00	320	320	2.48	794	794	2.48	2.48
	29,044			70,925	74,270		175,894	184,190		

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

Figure 3.2.5 (Cont'd)

RESIDENTIAL HOLDING CAPACITY

LAND USE DESIGNATION	GENERAL PLAN ACRES	LOW RANGE DU/AC	HIGH RANGE DU/AC	LOW RANGE DU'S	HIGH RANGE DU'S	YEAR 2000 POP/DU	LOW RANGE POP	HIGH RANGE POP	LOW RANGE POP/AC	HIGH RANGE POP/AC
VENTURA NGA										
OPEN SPACE	24,270	0.01	0.10	242	2,427	1.68	407	4,077	0.02	0.17
AGRICULTURAL	2,180	0.00	0.03	3	54	1.68	5	91	0.00	0.04
RURAL	62	0.20	1.00	12	62	1.68	20	104	0.32	1.67
NORTH COAST	72	----	----	1,953	1,953	1.68	3,281	3,281	45.57	45.57
	26,584			2,210	4,496		3,560	7,553		
VENTURA RIVER GA										
VERY LOW 1	219	0.03	0.05	5	10	2.44	12	24	0.05	0.11
VERY LOW 2	1,085	0.05	0.10	54	108	2.44	132	264	0.12	0.24
VERY LOW 3	121	0.10	0.20	12	24	2.44	29	59	0.24	0.49
LOW 1	447	0.20	0.50	89	223	2.44	217	544	0.49	1.22
LOW 2	515	0.50	1.00	257	515	2.44	627	1,257	1.22	2.44
LOW 3	409	1.00	2.00	409	818	2.44	998	1,996	2.44	4.88
MEDIUM 1	375	2.00	4.00	750	1,500	2.44	1,830	3,660	4.88	9.76
MEDIUM 2	443	4.00	6.00	1,772	2,658	2.44	4,324	6,486	9.76	14.64
HIGH	78	6.00	15.00	468	1,170	2.44	1,142	2,855	14.64	36.60
	3,692			3,816	7,026		9,311	17,145		
VENTURA RIVER NGA										
OPEN SPACE	2,991	0.01	0.10	29	299	2.45	71	733	0.02	0.25
RURAL	779	0.20	1.00	155	779	2.45	380	1,909	0.49	2.45
VERY LOW 1	3,300	0.03	0.05	82	165	2.45	201	404	0.06	0.13
VERY LOW 2	751	0.05	0.10	37	75	2.45	66	184	0.09	0.25
VERY LOW 3	139	0.10	0.20	13	27	2.45	32	66	0.23	0.47
LOW 1	143	0.20	0.50	28	71	2.45	69	174	0.48	1.22
LOW 2	93	0.50	1.00	46	93	2.45	113	228	1.26	2.45
LOW 3	157	1.00	2.00	157	314	2.45	385	769	2.45	4.90
HIGH	11	6.00	15.00	66	165	2.45	162	404	14.73	36.72
	8,364			613	1,988		1,479	4,871		
COUNTYWIDE TOTAL	530,419			269,394	454,438		718,047	1,212,097		

GA = Growth Area
NGA = Nongrowth Area
SPHERE = LAFCO Sphere of Influence

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Land Use Appendix

FIGURE 3.2.6

EMPLOYMENT HOLDING CAPACITY

DESIGNATION	GENERAL PLAN ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
CAMARILLO GA						
COMMERCIAL						
OFFICE	129	35.0	1,967	4.0	7,867	60.98
GENERAL	258	15.0	1,686	2.0	3,372	13.07
INDUSTRIAL						
GENERAL	776	20.0	6,761	2.0	13,521	17.42
IND/COM	11	20.0	96	2.0	192	17.42
R&D	50	20.0	436	2.0	871	17.42
PUBLIC						
SCHOOLS	185	10.0	806	1.0	806	4.36
TRANSIT CTRS	11	10.0	48	1.0	48	4.36
AIRPORT	640	1.0	279	1.0	279	0.44
CIVIC CENTER	4	20.0	35	4.0	139	34.85
HOSPITAL	9	40.0	157	3.0	470	52.27
SEMINARY	80	5.0	174	1.0	174	2.18
	2,153		12,443		27,739	
CAMARILLO NGA						
AGRICULTURAL	12,800	0.0	0	0.0	640	0.05
COMMERCIAL						
C-O	4	35.0	63	4.0	250	60.98
C-1	2	15.0	14	2.0	29	13.07
INDUSTRIAL	22	20.0	192	2.0	383	17.42
M-2	36	20.0	311	2.0	622	17.42
PUBLIC						
SCHOOLS	8	10.0	35	1.0	35	4.36
CAM ST HOSP	936	1.0	408	3.0	1,223	1.31
PUBLIC SVCS	3	10.0	13	3.0	39	13.07
	13,811		1,035		3,221	
FILLMORE GA						
AGRICULTURAL	400	0.0	0	0.0	20	0.05
COMMERCIAL						
ADMIN/PROF	14	35.0	213	4.0	854	60.98
HIGHWAY	30	15.0	196	2.0	392	13.07
CENTRAL BUS	42	25.0	457	2.0	915	21.78
INDUSTRIAL						
COM MFG	6	20.0	52	2.0	105	17.42
LIGHT IND	128	20.0	1,124	2.0	2,248	17.42
GENERAL IND	162	20.0	1,411	2.0	2,823	17.42
PUBLIC						
SCHOOLS	44	10.0	192	1.0	192	4.36
CIVIC CTR	5	20.0	44	4.0	174	34.85
	832		3,690		7,721	
FILLMORE NGA						
AGRICULTURAL	12,400	0.0	0	0.0	620	0.05
LAS POSAS NGA						
AGRICULTURAL	17,500	0.0	0	0.0	875	0.05
C-P-D	8	15.0	54	2.0	107	13.07
	17,508		54		982	

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.6 (Cont'd)

EMPLOYMENT HOLDING CAPACITY

DESIGNATION	GENERAL PLAN ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
MOORPARK GA						
AGRICULTURAL	4,322	0.0	0	0.0	216	0.05
COMMERCIAL						
NEIGHBORHOOD	13	15.0	85	2.0	170	13.07
GENERAL	181	15.0	1,183	2.0	2,365	13.07
COM/INDUS	10	20.0	87	2.0	174	17.42
INDUSTRIAL						
LIGHT IND	170	20.0	1,481	2.0	2,962	17.42
MEDIUM IND	254	20.0	2,213	2.0	4,426	17.42
PUBLIC						
SCHOOLS	37	10.0	161	1.0	161	4.36
MPK COLLEGE	103	5.0	224	1.0	224	2.18
PUBLIC SVCS	4	10.0	17	3.0	52	13.07
	5,094		5,452		10,751	
MOORPARK NGA						
AGRICULTURAL	735	0.0	0	0.0	37	0.05
OAK PARK GA						
COMMERCIAL	23	15.0	150	2.0	301	13.07
PUBLIC						
SCHOOLS	150	10.0	653	1.0	653	4.36
PUBLIC SVCS	6	10.0	26	3.0	78	13.07
	179		830		1,032	
OAK PARK NGA						
COMMERCIAL						
C-P-D	3	15.0	22	2.0	43	13.07
OJAI GA						
COMMERCIAL	116	15.0	758	2.0	1,516	13.07
GENERAL	190	1.0	83	0.5	41	0.22
COM RECREAT						
INDUSTRIAL	61	20.0	531	2.0	1,063	17.42
COM MFG	21	20.0	183	2.0	366	17.42
MFG PD						
PUBLIC	218	10.0	950	1.0	950	4.36
SCHOOLS	2	20.0	17	3.0	52	26.14
CITY HALL	1	40.0	17	3.0	52	52.27
HOSPITAL	2	10.0	9	3.0	26	13.07
PUBLIC SVCS	611		2,548		4,066	
OJAI NGA						
COMMERCIAL	2	15.0	13	2.0	26	13.07
INDUSTRIAL	9	20.0	78	2.0	157	17.42
PUBLIC						
SCHOOLS	443	1.0	193	1.0	193	0.44
	454		284		376	

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.6 (Cont'd)

EMPLOYMENT HOLDING CAPACITY

DESIGNATION	GENERAL PLAN ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
OXNARD GA						
AGRICULTURAL	6,900	0.0	0	0.0	345	0.05
COMMERCIAL						
TRUCK SALES	101	5.0	220	2.0	440	4.36
HWY RELATED	21	10.0	91	2.0	183	8.71
REG SHOP CTR	131	20.0	1,141	2.0	2,283	17.42
DIST SHOP CTR	27	15.0	176	2.0	353	13.07
CMTY SHOP CTR	18	15.0	118	2.0	235	13.07
CIVIC CENTER	163	20.0	1,420	4.0	5,680	34.85
SPECLTY SHOP	19	20.0	166	2.0	331	17.42
GENERAL	25	15.0	163	2.0	327	13.07
AUTO SALES	103	10.0	449	2.0	897	8.71
OFFICE/MOTEL	76	35.0	1,159	2.0	2,317	30.49
OFFICE	6	35.0	91	4.0	366	60.98
COM RECREAT	28	1.0	12	0.5	6	0.22
HARBOR RELATD	3	15.0	20	2.0	39	13.07
CBD	44	20.0	383	2.0	767	17.42
C-C	5	50.0	115	1.0	115	21.78
C-1	36	15.0	235	2.0	470	13.07
INDUSTRIAL						
LIMITED	1,030	20.0	8,973	2.0	17,947	17.42
LIGHT	1,606	20.0	13,991	2.0	27,983	17.42
HEAVY	368	6.5	1,042	2.0	2,084	5.66
PUB UTILITY	479	1.0	209	2.0	417	0.87
COM/IND	6	20.0	52	2.0	105	17.42
INDUSTRIAL	213	20.0	1,856	2.0	3,711	17.42
PUBLIC						
SCHOOLS	450	10.0	1,960	1.0	1,960	4.36
OX COLLEGE	102	5.0	222	1.0	222	2.18
AIRPORT	258	1.0	112	4.0	450	1.74
HOSPITALS	19	40.0	331	3.0	993	52.27
PUBLIC SVC	16	10.0	70	3.0	209	13.07
CITY HALL	6	20.0	52	3.0	157	26.14
TRANSP CTR	10	10.0	44	1.0	44	4.36
COMMUN CTR	23	10.0	100	1.0	100	4.36
	12,292		34,975		71,536	
OXNARD NGA						
AGRICULTURAL	12,570	0.0	0	0.0	629	0.05
POINT MUGU	4,163	3.0	5,440	2.0	10,880	2.61
	16,733		5,440		11,509	
PIRU GA						
AGRICULTURAL	1,300	0.0	0	0.0	65	0.05
COMMERCIAL	8	15.0	52	2.0	105	13.07
INDUSTRIAL	39	20.0	340	2.0	680	17.42
PUBLIC	21	10.0	91	1.0	91	4.36
	1,368		484		941	
PIRU NGA						
AGRICULTURAL	3,975	0.0	0	0.0	199	0.05

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.6 (Cont'd)

EMPLOYMENT HOLDING CAPACITY

DESIGNATION	GENERAL PLAN ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
PORT HUENEME GA						
CBC BASE						
COMMERCIAL	176	15.0	1,150	2.0	2,300	13.07
INDUSTRIAL	97	20.0	845	2.0	1,690	17.42
PUBLIC	772	10.0	3,363	3.0	10,088	13.07
CITY						
COMMERCIAL						
NEIGH/GEN	11	15.0	72	2.0	144	13.07
VISIT SERV	37	15.0	242	2.0	484	13.07
INDUSTRIAL						
COAST DEP	34	20.0	296	2.0	592	17.42
COAST REL	65	20.0	566	2.0	1,133	17.42
PUBLIC						
SCHOOLS	32	10.0	139	1.0	139	4.36
PUBLIC SVCS	7	10.0	30	3.0	91	13.07
	1,231		6,704		16,662	
SANTA PAULA GA						
AGRICULTURAL	2,575	0.0	0	0.0	129	0.05
COMMERCIAL						
OFFICE	11	35.0	168	4.0	671	60.98
GENERAL	158	15.0	1,032	2.0	2,065	13.07
NEIGHBORHOOD	3	15.0	20	2.0	39	13.07
C-P-D	3	15.0	21	2.0	42	13.07
INDUSTRIAL						
LIGHT	162	20.0	1,411	2.0	2,823	17.42
HEAVY	78	6.5	221	2.0	442	5.66
IND PARK	159	20.0	1,385	2.0	2,770	17.42
SEWAGE DISP	6	6.5	17	2.0	34	5.66
M-2	37	20.0	320	2.0	639	17.42
PUBLIC						
SCHOOLS	52	10.0	227	1.0	227	4.36
CITY HALL	1	20.0	9	3.0	26	26.14
PUBLIC SVCS	1	10.0	4	3.0	13	13.07
AIRPORT	38	1.0	17	0.5	8	0.22
HOSPITAL	8	40.0	139	3.0	418	52.27
	3,292		4,991		10,346	
SANTA PAULA NGA						
AGRICULTURAL	8,500	0.0	0	0.0	425	0.05
INDUSTRIAL						
LIGHT MFG	42	20.0	366	2.0	732	17.42
HEAVY IND	84	6.5	238	2.0	476	5.66
M-3	91	6.5	258	2.0	516	5.66
T AQUINAS COLL	19	1.0	8	4.0	33	1.74
	8,736		870		2,181	

GA = Growth Area
NGA = Nongrowth Area

Ventura County General Plan
Land Use Appendix

FIGURE 3.2.6 (Cont'd)

EMPLOYMENT HOLDING CAPACITY

DESIGNATION	GENERAL PLAN ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
SIMI VALLEY GA						
COMMERCIAL						
RECREAT COM	137	1.0	60	0.5	30	0.22
OFFICE	138	35.0	2,104	4.0	8,416	60.98
GENERAL	369	15.0	2,411	2.0	4,822	13.07
DISTRICT	284	15.0	1,856	2.0	3,711	13.07
REG CENTER	71	20.0	619	2.0	1,237	17.42
C-P-D	9	15.0	58	2.0	116	13.07
INDUSTRIAL						
LIGHT	1,117	40.0	19,463	2.0	38,925	34.85
BUSINESS PARK	261	40.0	4,548	4.0	18,191	69.70
INDUS RESERVE	702	40.0	12,232	2.0	24,463	34.85
PUBLIC						
CIVIC CENTER	44	20.0	383	3.0	1,150	26.14
PUBLIC SCVS	69	10.0	301	2.0	601	8.71
HOSPITAL	14	40.0	244	3.0	732	52.27
SCHOOLS	569	10.0	2,479	1.0	2,479	4.36
BRANDEIS INST	2,567	0.1	112	1.0	112	0.04
AIRPORT	130	1.0	57	0.5	28	0.22
RR DEPOT	2	10.0	9	1.0	9	4.36
LAW ENF OFFC	2	40.0	35	6.0	209	104.54
	6,485		46,967		105,231	
SIMI VALLEY NGA						
ROCKETDYNE	1,571	1.0	684	2.0	1,369	0.87
THOUSAND OAKS GA						
COMMERCIAL						
GENERAL	1,004	15.0	6,560	2.0	13,120	13.07
COM/INDUST	11	10.0	48	4.0	192	17.42
INDUSTRIAL						
CITY	875	20.0	7,623	2.0	15,246	17.42
M-1	496	20.0	4,325	2.0	8,649	17.42
PUBLIC						
SCHOOLS	393	10.0	1,712	1.0	1,712	4.36
CAL LUTH COLL	157	5.0	342	1.0	342	2.18
NEWB PK ACAD	65	5.0	142	1.0	142	2.18
INSTITUTIONAL	55	1.0	24	3.0	72	1.31
CIVIC CENTER	13	20.0	113	3.0	340	26.14
	3,069		20,888		39,814	

GA = Growth Area
NGA = Nongrowth Area

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FIGURE 3.2.6 (Cont'd)

EMPLOYMENT HOLDING CAPACITY

DESIGNATION	GENERAL PLAN ACRES	BUILDING INTENSITY (%)	FLOOR AREA	EMP/ KSF	TOTAL EMP	EMP/ ACRE
VENTURA GA						
AGRICULTURAL	3,010	0.0	0	0.0	151	0.05
COMMERCIAL						
PROF OFFICE	62	35.0	945	4.0	3,781	60.98
GENERAL	373	15.0	2,437	2.0	4,874	13.07
NEIGHBORHOOD	103	15.0	673	2.0	1,346	13.07
PLANNED COM	230	15.0	1,503	2.0	3,006	13.07
PC-TOURIST	29	15.0	189	2.0	379	13.07
PMXD	304	15.0	1,986	2.0	3,973	13.07
HARBOR COM	114	15.0	745	2.0	1,490	13.07
COMMERCIAL*	16	15.0	105	2.0	209	13.07
C-P-D*	3	15.0	19	2.0	38	13.07
INDUSTRIAL						
GENERAL	1,317	20.0	11,474	2.0	22,947	17.42
PLANNED DEV	597	20.0	5,201	2.0	10,402	17.42
INDUSTRIAL*	153	20.0	1,333	2.0	2,666	17.42
INDUSTRIAL*	205	4.0	357	2.0	714	3.48
OIL FIELD*	173	1.0	75	2.0	151	0.87
M-3*	10	20.0	85	2.0	169	17.42
PUBLIC						
SCHOOLS	185	10.0	806	1.0	806	4.36
GOVT CENTER	73	20.0	636	3.0	1,908	26.14
PUBLIC SVCS	4	10.0	17	3.0	52	13.07
CITY HALL	8	20.0	70	3.0	209	26.14
HOSPITAL	14	40.0	244	3.0	732	52.27
VENTURA COLL	55	10.0	240	2.0	479	8.71
PUBLIC*	1	15.0	7	2.0	13	13.07
	7,039		29,146		60,495	
VENTURA NGA						
AGRICULTURAL	2,180	0.0	0	0.0	109	0.05
COMMERCIAL						
C-C*	1	50.0	13	1.0	13	21.78
INDUSTRIAL						
C-M*	351	1.5	229	2.0	459	1.31
PUBLIC SERVICE	3	10.0	13	3.0	39	13.07
	2,535		255		620	
VENTURA RIVER GA						
COMMERCIAL	121	15.0	791	2.0	1,581	13.07
INDUSTRIAL	12	20.0	105	2.0	209	17.42
PUBLIC						
SCHOOLS	18	10.0	78	1.0	78	4.36
VILLANOVA SC	96	0.5	21	4.0	84	0.87
HONOR FARM	127	1.0	55	2.0	111	0.87
	374		1,050		2,063	
VENTURA RIVER NGA						
COMMERCIAL	6	15.0	39	2.0	78	13.07
INDUSTRIAL	5	20.0	44	2.0	87	17.42
PUBLIC-SCHOOL	8	10.0	35	1.0	35	4.36
	19		118		200	
NORTH HALF NGA						
COMMERCIAL	2	15.0	13	2.0	26	13.07
INDUSTRIAL	500	0.1	22	2.0	44	0.09
PUBLIC SVCS	80	1.0	35	3.0	105	1.31
	582		70		174	
COUNTYWIDE TOTAL	123,192		179,584		380,986	

GA = Growth Area
NGA = Nongrowth Area

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3.3 POPULATION AND HOUSING

3.3.1 COUNTYWIDE POPULATION AND DWELLING UNIT FORECAST

The population and dwelling unit forecasts for Ventura County are shown in Figures 3.3.1 through 3.3.2. The forecasts were developed by City and County staffs and the Countywide Planning Program Advisory Committee. They were then reviewed by each City Council and adopted by the Board of Supervisors on May 7, 1985.

The forecasts are in five-year increments from 1980 to the year 2010, and are broken out into Growth and Nongrowth areas. The boundaries of the Growth/Nongrowth areas are shown in Figure 3.2.1. To facilitate comparison with forecasts prepared by the Southern California Association of Governments (SCAG), the forecasts have also been organized by Regional Statistical Area (RSA). RSA boundaries are shown in Figure 3.3.4.

3.3.1.1 Alternate Forecast Scenarios

During the forecast preparation process, the Countywide Planning Program Advisory Committee reviewed three forecast scenarios: a high-range forecast, a mid-range forecast, and a low-range forecast.

The high-range forecast would have given the County a population of 838,522 for the year 2000 (approximately 50,000 persons higher than the forecast which was ultimately adopted). The high-range forecast which was selected for consideration was prepared by the State Department of Finance in October 1983. It assumed an increase in the annual in-migration rate and was not adjusted for growth controls in effect in Camarillo, Ojai, and Thousand Oaks. (It should be noted that a more recent forecast has been published by the Department of Finance in December 1986 which projects a year 2000 population of 784,465, slightly lower than the County's adopted forecast.)

The mid-range forecast would have given the county a population of 811,305 for the year 2000. The mid-range forecast was the County's previously-adopted official forecast.

The low-range forecast would have given the county a year 2000 population of 685,332. This forecast was originally prepared in 1982 as a control measure alternative under the 1982 Air Quality Management Plan. This forecast was prepared to determine the population control measures which would be needed to enable the County to attain the National Ambient Air Quality Standards in the Oxnard Plain and the Ojai Valley. Because it was determined that this forecast would not be feasible to implement, it was not adopted in 1982.

The implications of the three forecast scenarios are as follows:

(1) High-Range Forecast

- Advantages:
  - More available housing would stabilize housing costs, reduce crowding in each unit.
  - More older housing units would be available for low-income families and first-time buyers as current owners move to newer units.

- Greater availability of housing would encourage commercial and industrial development and would assure better balance between jobs and housing.

- There would be less likelihood of the passage of State legislation which would override local controls to mandate new housing construction.

o Disadvantages:

- Attainment of the National Ambient Air Quality Standards would not be reached using current air pollution control technology.

- Current progress which is being made to improve air quality or to attain federal standards would be impeded.

- The available emission allocations for new commercial and industrial projects would be more restricted.

- A larger population would increase the need to upgrade the infrastructure (roads, sewer treatment facilities, sanitary landfill capacity, schools).

- Lifestyle in the County would be changed from rural-suburban mix to predominantly suburban.

- Energy and water consumption would increase.

- Higher rate of development would accelerate conversion of agricultural lands and hillside development.

- Public service expenditures would increase (fire and police protection, schools, parks, health care, etc.).

- Greater likelihood of County water shortages (or earlier occurrence) due to population growth.

- Faster rate of development could result in development in greenbelts.

(2) Mid-Range Forecast

o Advantages:

- Forecast would be consistent with previously-adopted forecasts and trends.

- Forecast would maintain existing balance between housing and jobs.

- Although housing and land costs would be slightly higher than under the high-range forecast, they would be relatively stable.

- Forecast would not require adoption of new growth control ordinances or policies.

- Current plans to upgrade the infrastructure, which are based on current trends, would not have to be significantly amended.

- o Disadvantages:
  - Non-attainment of National Ambient Air Quality standards.
  - Some agricultural land and hillsides would be converted to residential development.
  - Increased possibility of adoption of state legislation to override local controls and mandate housing construction in County.
  - Possibility of future water shortages would exist.

(3) Low-Range Forecast

- o Advantages:
  - Attainment of National Ambient Air Quality Standards would be more likely, although current studies indicate attainment would not occur if all growth was halted.
  - Less need to upgrade infrastructure.
  - Less need for public services.
  - Less energy, water demands.
  - Expected water shortages due to population growth would be less likely.
  - Less impact on wastewater treatment facilities, sanitary landfills.
  - More agricultural lands and hillsides would be preserved.
  - Fewer and less significant cumulative environmental impacts would occur than under the current forecast.
  - Higher dwelling unit costs would encourage upgrading and replacement of existing units.
  - Existing low to moderate density lifestyle would continue.
- o Disadvantages:
  - Possible acute housing shortages.
  - Higher housing prices.
  - "Pricing-out" of low-income families may occur.
  - Overcrowding in existing housing units.
  - Lack of balance between jobs, housing.
  - Possible move by state legislature to override local controls to mandate new housing programs.

- High land costs, lack of available housing could discourage commercial development.

- Low-range forecast would allow fewer housing units in Camarillo and Thousand Oaks than are allowed under their current growth control ordinances. Therefore, adoption of low-range forecast would require stricter growth control ordinances in jurisdictions which already have such ordinances. In addition, other communities would probably have to adopt similar ordinances to remain consistent with forecast.

- Low-range forecast deviates from current forecast and current trends. Therefore, it may not be realistic unless strict implementation measures are adopted. One of the Environmental Protection Agency criteria for air quality management plans is that the plan must contain control measures which are "reasonable." The low-range forecast was not adopted in 1982 because it was determined that the controls necessary to implement it would not be reasonably available.

The mid-range forecast was selected for several reasons:

(1) It was the most realistic forecast in terms of available growth trend data;

(2) Local growth control policies and programs which were already in place would not have to be amended;

(3) The forecast would not result in acute housing shortages and a "pricing-out" of low-income families;

(4) The forecast would be consistent with adopted city and County general plans; and

(5) Public service and infrastructure expenditures would remain relatively stable.

3.3.1.2 Forecast Methodology

The forecast was developed over a ten-month period in a series of meetings with city staffs and the Countywide Planning Program Population Forecast Subcommittee. The forecast was largely developed by a "bottom-up" approach, in which each jurisdiction submitted its small-area forecast for consideration before a final Countywide forecast figure was selected (the alternative "top-down" approach would have involved the development of a Countywide forecast first, followed by a division of the forecast into the various subareas). The "bottom-up" approach had the advantage of basing the forecast as much as possible on local policies and local input.

The local forecasts were compared with building completion trend data, previous forecasts, and "holding capacity" figures (see Figures 3.3.5 and 3.3.6). The holding capacity figures represent the ultimate number of persons and dwelling units which could be accommodated in each Growth and Nongrowth Area based on adopted City and County general plans (see also Figure 3.2.5 above).

In the case of one city (the City of Fillmore), the City Council-preferred forecast was much higher than the city's holding capacity. However, the forecast which was ultimately adopted by the Board of

Supervisors for the Fillmore Growth Area was proportionate with the holding capacity.For all other growth areas, the city-preferred forecasts were proportionate with the holding capacity figures.

Although emphasis was placed on using the city-preferred population figures for the year 2000 (except for the City of Fillmore), the population figures for the years before and after that date, and all of the dwelling unit figures, were derived from these figures by a uniform methodology.

To obtain these figures for years before and after the year 2000, it was necessary to develop population per dwelling unit ratios for the County as a whole, then for each Growth and Nongrowth Area. As mentioned in Section 3.2.1 above, the Countywide ratio is based on household size projections prepared by the State Department of Finance in July 1984.

It should be noted that household size is not identical with the population per dwelling unit ratio: it does not include persons living in group quarters, such as military barracks or college dormitories, and it does not consider vacant dwelling units. Some adjustments were made to the DOF household size projections to obtain population per dwelling unit figures for use in the County forecast. These adjustments provided a Countywide population per dwelling unit ratio forecast.

To obtain a similar forecast for each Growth/Nongrowth Area, the actual 1980 ratios for each subarea were obtained, then trended to merge with the Countywide ratio in 100 years. The resultant ratios are presented in Figure 3.3.3.

The ratios for each subarea in the year 2000 were divided into each city's "preferred" population forecasts for their respective subareas to obtain year 2000 dwelling unit forecasts. A straight-line dwelling unit interpolation between 1985 and the year 2000 was then carried out. These straight-line forecasts were then extended to the year 2010. The adopted dwelling unit forecast (Figure 3.3.2) is a straight-line forecast.

The final step was to multiply the dwelling unit forecasts for each subarea by the corresponding population per dwelling unit ratios, in order to obtain the population forecasts for the years other than the year 2000. The adopted population forecast (Figure 3.3.1) was prepared in this manner; any further adjustments to the figures were carried out only after the straight-line dwelling unit forecasts were adjusted first.

3.3.2 ASSESSMENT OF HOUSING NEEDS

Pursuant to California planning law, jurisdictions are required to "make adequate provisions for the housing needs of all economic segments of the community". In order to provide housing opportunities for persons of all income levels, housing needs must be assessed. In assessing housing need, documentation of growth projections and a quantification of the locality's existing and projected housing needs for all income levels is required. In accordance with Government Code Section 65584, these existing and projected needs must include the locality's share of the regional housing need.

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The housing needs assessment presented in this section is for the 6.5 year planning period of January 1, 1988, to June 30, 1994. This 6.5 year analysis is undertaken to satisfy the requirements of Section 65583 of the State Government Code which requires a schedule of actions to implement the goals and objectives of local housing elements. In addition, the planning period (1988-1994) conforms to the statutory planning cycle of the Regional Housing Needs Plan (RHNP) as mandated by State law.

The methodology used in this section is based on the 1988 Regional Housing Needs Assessment (RHNA) prepared by the Southern California Association of Governments (SCAG). The RHNA is a comprehensive document analyzing housing needs in each locality of the region. As mandated by State Housing law, this document identifies existing and future housing needs for each jurisdiction in the SCAG region.

3.3.2.1 Existing Housing Need

Existing need is defined in the 1988 RHNA as the number of lower income households paying over 30 percent of their gross household income toward rent or house payments. Lower income households are those which have incomes less than 80 percent of the County's median household income.

Utilizing State Department of Finance (DOF) and 1980 census data the SCAG determined that 3,058 lower income households overpaying for shelter existed in the unincorporated area of Ventura County. This number equals approximately 11 percent of the unincorporated area's total households (See Figure 3.3.7).

3.3.2.2 Projected Housing Need

Future need is defined in the 1988 RHNA as the units needed to accommodate the forecasted growth in the number of households by July 1, 1994. In addition, future need considers the number of units which must be added to achieve an ideal vacancy and compensate for anticipated demolitions. The RHNA identifies future housing need for the 1989-1994 planning period for each jurisdiction in the Southern California region.

The total five year housing need forecast is the sum of the five year growth (1989-1994)in households, the vacancy adjustment and the expected number of demolitions. Figure 3.3.8 presents the 1989-1994 future housing need for each jurisdiction in Ventura County. Future need in the unincorporated area of Ventura County is projected to be 2,878 dwelling units.

As mentioned above, three components were utilized by SCAG to determine future need; 1) household growth; 2) vacancy adjustments; and 3) demolition adjustments. These are described below and depicted on Figure 3.3.8:

Household Growth

Household growth is defined as the total estimated household growth for the five year planning period beginning July 1, 1989 to July 1, 1994. One of the elements in determining 1989-1994 housing need is the forecasted growth in households for each jurisdiction. To obtain household information for each jurisdiction, SCAG utilized annual household estimates from the State Department of Finance (DOF).

In addition, future household growth information was obtained from the Growth Management Plan (GMP) prepared by SCAG. The GMP forecasts future levels of population, housing units, households and job growth by jurisdiction. Utilizing the GMP, SCAG projected the number of 1994 households for each jurisdiction. The total estimated household growth for the planning period was determined by subtracting the total 1988 households (DOF data) from the forecasted 1994 households (GMP data) and multiplying the sum by 0.769, which is the 5 year planning period (7/89 to 7/94) divided by the 6.5 years (1/88 to 7/94) between the base year and the target year. Household growth for the unincorporated area of Ventura County from July 1, 1989 to July 1, 1994 is projected to be 2,576 (See Figure 3.3.8).

Vacancy Adjustment

A second component of future housing need is the number of units needed to achieve an ideal vacancy rate. The RHNA defines the ideal rate as the number of units needed to achieve a vacancy rate of two percent in single-family units and five percent in multi-family units. The ideal rate for a given jurisdiction is dependent on the proportion of single-family units to all housing units in each jurisdiction in 1988. The ideal vacancy rate for the unincorporated area of Ventura County was determined by the RHNA to be 2.54.

Existing vacancy need is defined as the number of additional or fewer units that would be needed in each jurisdiction to bring the vacancy rate to the ideal rate. Existing vacancy need is calculated by subtracting the product of 1987 vacancy rate times the total 1988 housing units from the product of ideal vacancy rate times the total 1988 housing units. The existing vacancy need for Ventura's unincorporated area is 149 units.

The RHNA also calculates future vacancy need. This is defined as the number of additional units needed to maintain ideal vacancy rates as jurisdictions grow. The additional vacancy need is determined by multiplying the household growth (7/89 to 7/94) by the ideal vacancy rate. The RHNA determined that the additional vacancy need for the unincorporated area of Ventura County is 65 units.

The total vacancy adjustment is defined as the total number of units needed to attain and maintain ideal vacancy rates. Total vacancy adjustment is the sum of existing need (149 units) and additional vacancy need (65 units). According to the RHNA the total vacancy adjustment figure for the unincorporated area of Ventura County is 214 units.

Demolition Adjustment

The third component of future housing needs is a projection of the number of units which will be lost from the housing inventory due to demolitions or fire. SCAG based the projections on the annual average of demolition in 1984, 1985, and 1986. The number of demolitions from 1984 through 1986 is multiplied by 1.66 to attain the demolition adjustment for each jurisdiction for the five year period (1989 to 1994). The demolition adjustment for the unincorporated area of Ventura County is 88 units (See Figure 3.3.8).

Avoidance of Impact: Once the future housing need is determined, it is distributed by four income categories: very low-income (less than 50% of median income), low-income (50% to 80% of median income), moderate-income (80% to 120% of median income), and high-income (more than 120% of median income). This distribution is further adjusted for avoidance of impact.

"Avoidance of impact" is defined in the 1988 RHNA as "the undue concentration of very low and low income households in a jurisdiction." The intent of the Avoidance of Impact adjustment is to avoid further concentration of lower income households in jurisdictions which have more than the regional average proportion of lower income households.

Every jurisdiction had its existing lower income household distribution adjusted "25% of the way" towards the regional average of 40.2% lower income households. For example, jurisdictions with an existing percentage of lower income households below the regional average (40.2%) were adjusted upwards by 25%. Jurisdictions with an existing percentage of lower income households above the regional average were adjusted downward by 25%.

Those jurisdictions considered to be highly impacted were adjusted further to reduce their lower income proportion. Highly impacted is defined as "exceeding the regional average proportion of lower income households by more than 10%." For highly impacted jurisdictions, the proportion of lower income units was further reduced to a level which would bring the jurisdiction within 10% of the regional average in 20 years.

Figure 3.3.9 presents a breakdown of units by income category for each jurisdiction in the County. In the unincorporated area, the future housing need is identified as follows: 485 very low-income units, 664 low-income units, 570 moderate-income units and 1,159 high-income units. Note, that the "gap" period adjustment has not been applied to the above breakdown. The following section describes the adjusted future housing need (including "gap" period units) for the unincorporated area of Ventura County.

Gap Period: The State Department of Housing and Community Development (HCD) has determined that jurisdictions must also account for the future needs that would have occurred during the 18 month "gap" period from January 1, 1988 to June 30, 1989. The "gap" period is the 18 months between the end of the RHAM period (January 1988) and the beginning of the RHNA (July 1989) period.

For purposes of this General Plan, the "gap" period future housing need units were combined with the five-year future housing need units in order to project a 6.5 year future housing need (January 1988 to July 1994). Figure 3.3.10 projects the adjusted 6.5 year future housing need in Ventura County to be 37,056 units. This number represents, 5,686 very-low income units, 7,214 low-income units, 8,325 moderate-income units and 15,831 high-income units (See Figure 3.3.11).

In the unincorporated area of Ventura County the adjusted 6.5 year future housing need is 3,697 units (See Figure 3.3.10). Based on this, 623 very low-income units, 853 low-income units, 732 moderate income-units and 1,489 high-income units are needed in the unincorporated area between January 1988 and July 1994 to meet its share of the regional housing need (See Figure 3.3.11).

3.3.2.3 Analysis of Household Characteristics

- Household Income

  The 1979 median household income for the County was $21,243. Figure 3.3.10 presents a breakdown of the percentages of households in very low, low, moderate, and upper income categories by jurisdiction, based on the 1980 Census. These categories are defined by the U.S. Department of Housing and Community Development as follows:

  (1) Very low income - less than 50% of median County income.

  (2) Low income - less than 80% of median County income.

  (3) Moderate income - less than 120% of median County income.

  (4) Upper - greater than 120% of median County income.

  As Figure 3.3.10 shows, there were approximately 17% very low income households (2,483 households) and 23% low income households (3,304 households) in 1979. These percentages were used to prepare estimates of the number of households in each income category in 1987, shown on the same table. It was assumed that the percentage distributions for each income category would remain constant. The total number of households in 1987 was taken from State Department of Finance estimates.

  For reference, HUD estimates that the overall County median income in February 1987 was $36,700, a 73% increase from the 1979 median income.

- Affordability of Housing

  In the 1983 Regional Housing Allocation Model, the Southern California Association of Governments estimated the number of "households in need" by jurisdiction in 1980. A "household in need" is defined as a lower-income household (defined above) paying over 30% of its income for housing. Federal and state agencies regard an income-to-housing-costs ratio of greater than 30% to be an inordinate share of income for housing, or overpaying.

  It should be recognized that upper income households are generally capable of paying a larger share of their income for housing. This is one reason for focusing estimates of housing needs on lower-income groups.

  In the unincorporated area, SCAG estimated that 3,058 lower income households overpaid for shelter. This number represents approximately 11% of the unincorporated area's total households.

- Housing Value and Ability to Pay

  In November 1986, the median housing value in Ventura County was $149,000 (Source: California Association of Realtors). On a 30-year mortgage at 10% interest and a 10% down payment, monthly payments of approximately $1,200 would be required. This figure does not include property taxes or homeowner's insurance, which would increase monthly costs to approximately $1,350.

To keep monthly payments below 30% of income, gross monthly income would have to be $4,500, and gross annual income would have to be $54,000. As stated above, the Countywide median household income in February 1987 was $36,700. To express the comparison another way, a median-income household is paying approximately 44% of its monthly income to live in a median-priced house in the County in 1987.

o Rent and Ability to Pay

Generally, rental units are more accessible to low income households than ownership units are. For example, in 1980, median monthly rent was $317, which would have required an annual gross income of $12,680.

The County Planning Division was unable to obtain any updated 1987 median rent figures for the County. However, by comparing the rate of increase for rent from 1980 to 1983 with to the rate of increase for median income for the same period, the Planning Division estimates that median rent in 1987 is $642.

At this rental figure, to keep monthly payments below 30% of income, gross monthly income would have to be $2,140 and gross annual income would have to be $25,680.

o Housing Mix

In 1980 there were 31,364 housing units (total) in the unincorporated County. Of the year-round units in Ventura County, 72% were single-family units, 23% were multi-family units, and 5% were mobile homes.

Since the Census, the percentage of single-family units has increased to 82%, and the percentage of multi-family units has dropped to 13% (State Department of Finance).

o Tenure

The ownership or rental status of a unit is referred to as "tenure."

In the unincorporated County in 1980 there were 20,157 ownership units and 9,759 rental units. Twenty-seven percent of all single family units are renter occupied, compared to 76% of all multi-family units and 19% of all mobile homes.

Within Ventura County in 1980, a higher percentage of very low and low income households rented rather than owned their housing. Sixty percent of very low income households rented, and 57% of low income households rented, but only 22% of moderate and upper income households rented.

No post-census data on tenure are available.

o Special Housing Needs

- The Elderly: Generally, the elderly are on low, fixed incomes, and the family or household size is small. Housing for the elderly generally needs to be located near public transportation and services such as doctors, hospitals, and grocery stores. In 1980, there were 4,616 householders in the unincorporated areas of the County who

were 65 or older, and 25,879 countywide. In addition, there were 335 elderly householders with incomes below the poverty level in the unincorporated areas, and 1,880 such householders in the entire County.

- Single-Headed Households Below Poverty Level: Households headed by single persons who have children also have special housing needs. These families need larger units to avoid overcrowding, lower housing cost because of the single income, and proximity to employment. In 1980 there were 756 female headed households (with children) in the County whose incomes are below the poverty level. Eighty-six of these householders are living in the unincorporated part of the County.

- Farmworkers: Another group in the County which has special housing needs is the farmworker population. Because of their low annual income, low-cost housing is needed. Furthermore, their housing should be near the agricultural areas in which they are employed to reduce transportation costs. Another special housing requirement for farmworkers, caused by seasonal employment, is adequate seasonal housing.

  Much of the State-licensed farmworker housing in the County is designed to accommodate single men rather than families. This forces farmworker families to find alternative housing, which frequently is substandard, unhealthy or unsafe (Refer to Draft Environmental Impact Report for Conditional Use Permit No. 4145, State Clearinghouse No. #83031352, pages 38-47). The County's Building and Safety Department estimates that between 200 and 500 farmworkers live in illegal or substandard housing in the Piru area, with additional ones located around Fillmore.

  The 1983 Regional Housing Allocation Model prepared by SCAG estimated that there were 6,255 farmworker households in the County in 1980. Of these, 1,574 were estimated to live in the unincorporated areas of the County. SCAG estimated that 90% of the farmworker households were low and very low income households, which represents 1,417 households (866 or 55% were estimated to be very-low income, and 551 or 35% were estimated to be low income households.

- Handicapped/Disabled: The other group which requires special housing is the handicapped population. The census showed that in 1980 Ventura County had 25,803 persons (aged 16 to 64 and not in an institution) suffering from a work disability (limited in the ability to work because of a health condition), with 11,746 of those being completely prevented from working. Overall, the unincorporated County has 4,709 disabled persons.

  Because of their employment limitations, it is probable that disabled persons receive low incomes, so they need low cost housing. There might also be a need for special structures within the house, such as wheelchair ramps, accessible electrical outlets, accessible appliances, etc.

- Homelessness: The problem of homelessness in Ventura County is complex. Families and individuals in Ventura County needing emergency shelter at some point in the year

probably number in the thousands. While an accurate count of the total number of homeless in the County cannot be obtained, estimates from the County Mental Health Department, various housing authorities, local service providers, and the recent surveys conducted by the Ventura County Homeless Coalition and the United Way show approximately 2,000 individuals in the County may be living in campgrounds, vehicles, or other temporary situations. This estimate does not include those referred to as the "invisible homeless," those families whose economic situation forces them to live in motels or in overcrowded homes with other families. One local housing authority estimates 40% of applicants for low income housing are doubling up with families in other residences.

The Ventura County Coalition for the Homeless conducted a "profile survey" of selected homeless persons in December 1984. Survey takers interviewed individuals and family groups in campgrounds, parks, hot meal sites, shelters, motels and other areas where the homeless are known to stay. 195 surveys were attempted; a total of 488 individuals were represented in the groups approached.

SUMMARY OF KEY FINDINGS

60% of homeless in Ventura County area are not transients but residents.
60% have been homeless six months or less.
64% of the adults have completed high school or had post secondary schooling.
56% report they are employed or actively seeking work.
2% of the adults receive General Relief.
27% report they have been victims of crime in the last year.

In addition to the above findings, the County prepared a Comprehensive Homeless Assistance Plan (CHAP) in September 1987 which reports that, according to national estimates, 25% to 30% of the homeless are mentally ill. According to the CHAP report, the County Mental Health inpatient unit is currently overcrowded (35 to 45 patients in a 28-bed facility). The CHAP report emphasizes that traditional shelter beds will not meet the needs of the mentally ill; the report recommends a Transitional Bed Program which includes staff who can link residents to the mental health services, entitlement benefits, and medical care, as well as long-term housing. The report estimates that 100 transitional beds are needed in the County for stabilization, referral to entitlement benefits, and for facilitating a transition to long-term housing.

The CHAP report states that additional shelter and transitional housing is also needed for other segments of the housing population in the County. It provides an inventory of the currently-available facilities:

1. American Red Cross/Armory Warming Shelter - The American Red Cross contracts with the Public Social Services Agency to manage the Armory Warming Shelter for the homeless during the winter months. 100 beds are available November through March, when weather criteria is met.

2. Care and Share - This agency offers one-time emergency short-term lodging vouchers for low-income and homeless individuals.

3. Catholic Charities - This Countywide organization provides limited emergency shelter vouchers to low-income County residents.

4. Coalition Against Household Violence Shelter - This shelter provides beds for a maximum of five women and their children seeking refuge from battering situations. Seventeen beds are available on a year round basis.

5. Conejo Valley Winter Shelter - The shelter is a religious coalition providing nighttime shelter in host churches and synagogues to families and single women. Twenty beds are available November through March.

6. Interface - This facility operates a four family shelter for victims of domestic violence; housing for runaway and homeless teenagers in eleven cool homes, licensed for foster care; and a crisis care facility for abused and neglected children aged 10 to 17. A total of 44 beds are available on a year round basis to serve these programs.

7. Project Understanding - The Religious Coalition for the Homeless, a program of Project Understanding, operates a shelter for families and single women. Twenty beds are available September though June.

   In addition, the Religious Coalition is the focal point for the Adopt-A-Family program. Three churches in the City of Ventura have placed trailers on their church property to provide transitional housing for homeless families. A total of thirteen beds are available year round.

8. Public Social Services Agency - PSSA administers the temporary and permanent housing assistance programs established by the McKinney Act for Aid to Families with Dependent Children (AFCD) recipients. The agency provides motel vouchers for up to 16 nights to homeless AFDC recipient families.

9. Salvation Army - This organization offers short-term lodging vouchers to low-income and homeless individuals.

10. Simi Valley Interfaith Coalition for the Homeless and Needy - The Coalition operates the Public Action to Deliver Shelter (P.A.D.S.) program. Twenty beds are available November through March.

11. Ventura County Rescue Mission Mens Shelter - This facility houses males who are enrolled in the Mission's drug and alcohol rehabilitation program. In addition, lodging is provided for homeless males on a

drop-in basis for up to five consecutive nights a month. A total of 82 beds are available on a year round basis.

12. Ventura County Mental Health Emergency Shelter Program - This shelter provides emergency housing for mentally ill individuals who are homeless. Five beds are available on a year round basis.

13. Zoe Christian Center Homeless Shelter - This facility provides shelter for homeless families and single women. The program offers both emergency shelter and transitional housing. A total of 202 beds are available on a year round basis.

3.3.2.4 Housing Characteristics/Housing Stock Condition

The Census Bureau ceased publishing housing stock condition data after 1960. However, there are three categories of data which are still included in the Census data and which give some indication of housing stock conditions: overcrowding; lack of plumbing facilities; and age of the dwelling unit. A dwelling unit is considered overcrowded if it is inhabited by more than one person per room. A unit which lacks complete plumbing facilities (hot and cold piped water, a flush toilet, and a bathtub or shower) inside the housing unit for the exclusive use of the occupants was also identified in the 1980 Census. Thirdly, the Census identified the number of structures built in each decade for each jurisdiction.

The above data are presented in Figures 3.3.13 through 3.3.15.

3.3.2.5 Inventory of Land Suitable for Residential Development

The County Guidelines for Orderly Development direct residential development at urban densities either to cities or to existing unincorporated urban and rural communities. There are 117,450 acres of land designated "Urban" in the County General Plan, but only 4,150 acres are located outside the cities.

The General Plan also designates 4,350 acres as "Existing Communities"; it includes those areas which are presently developed to densities greater than one dwelling unit per acre, but are not appropriate for "Urban" designation because they are outside a city sphere or recognized urban center.

Figures 3.3.16 and 3.3.17 identify areas which are suitable for low to moderate income housing.

Based on cursory investigation of available urban services, it is believed that each of these areas, with the exception of Piru, Oak Park, and portions of the North Coast have sufficient infrastructure to accommodate the residential development indicated. Oak Park has a problem with sewage treatment plant capacity, which can be solved by planned plant expansion. In Piru, CDBG funds were awarded so that a new domestic water system could be installed. This system could alleviate some of the water supply constraints on development. Finally, La Conchita in the North Coast is not currently serviced by a sewer system. All new housing units must provide sufficient land area to construct septic systems, which reduces the development potential of the area.

The General Plan also designates several unincorporated areas as Rural. There are 10,200 acres of land outside the cities' Spheres of Influence with this designation. The Rural designation includes lands which are currently developed or are planned for low density residential uses (1 acre/dwelling unit or greater). Areas that have the Rural designation are generally located in the Santa Rosa Valley, Ojai Valley, and Lake Sherwood. However, because these areas have zoning well beyond the 10,000 square feet per dwelling unit range, they would not provide housing opportunities for low to moderate income families.

- Second Dwelling Units

  In all residential zones, as well as agriculture and open space zones, a second dwelling unit with complete, independent living facilities may be created subject to certain development standards. While it is difficult to assess the number of second dwelling units that are likely to be constructed, it is nevertheless a potentially important means of providing affordable housing.

- Farmworker Housing

  In Agriculture, Open Space and Rural Agriculture zones, farmworker housing can be constructed. On lots of 40 acres or larger, a Planning Director approved Conditional Use Permit is required, while on lots of less than 40 acres, a Planning Commission approved CUP is necessary. The density is determined during the permit process.

- Surplus Government Property

  Surplus properties owned by Federal, State and County governments and local school districts are another source of potential land that could be considered for acquisition and development for housing.

  The State of California Department of Housing and Community Development operates a Surplus Lands Program which functions as a central collection center for information on public surplus land and buildings available through Federal, State and local government agencies. The program lists properties that have potential for development of low- and moderate- income housing. If a site has housing development potential, local developers (government, non-profit, and for-profit) are notified and assisted with the acquisition and development process.

  The properties available for purchase within the unincorporated County are two school sites in El Rio/Nyeland Acres, which together would add an additional 13.3 acres to available vacant land. Both sites are located in unincorporated Urban designated areas.

- Redevelopment Sites

  There are several urban areas in unincorporated Ventura County which show a high potential for redevelopment or rehabilitation. These are located in the following areas: Ventura Avenue, El Rio/Nyeland Acres, Ojai, Piru, Ventu Park and Santa Susana Knolls.

The communities of El Rio and Piru are currently target areas for rehabilitation activities under the County's Community Development Block Grant (CDBG) program.

In addition, the County is providing CDBG funds toward the rehabilitation efforts at Cabrillo Village, a farmworker community located in the unincorporated community of Saticoy.

3.3.2.6 Housing Constraints

The purpose of this section is to discuss the factors which affect the availability and affordability of housing.

The price of housing has increased sharply over the last decade. While the median price for a home in Ventura County was $23,100 in 1970 (U.S. Census 1970), it had risen to $93,300 in 1980 (U.S. Census 1980). This represents an increase of over 300%, and the cost of housing is still escalating. As stated in Section 3.2.3 above, the median cost for a new home in Ventura County was $121,200 in 1982 (Construction Industry Research Board, August 1983), and the average price for a new home in the first quarter of 1987 was $195,028, an increase of 60% in five years (Market Bulletin, Continental Land Title Co.).

Many direct and indirect costs influence the sales or rental price of new housing. Direct costs include the cost of land, site improvements, construction and infrastructure, and indirect costs consist of financing, sales and marketing and developer profits.

o Non-Governmental Constraints

The Santa Barbara-Ventura Counties Region of the Building Industry Association of Southern California has provided a detailed analysis of the components that made up housing prices in 1980. The development costs for a new single- family attached unit of approximately 1,150 square feet in Ventura County were broken down as follows:

- Raw Land	$ 7,600.00	9.5%
- Land Improvements	$11,200.00	14.0%
- Material and Labor Costs	$34,000.00	42.5%
- Finance Costs	$ 9,600.00	12.0%
- Cost of Sales	$ 2,800.00	3.5%
- Overhead and Profit	$10,000.00	12.5%
- Fees and Permits	$ 4,800.00	6.0%
	$80,000.00	100.0%

The highest increase in housing construction cost can be attributed to an increase in material and labor (see Figure 3.3.18). Raw land and land improvements ranked second, and construction and financing ranked third.

o Local Government Constraints

Local governments affect the distribution, supply and cost of housing through land use controls, development permits, processing and improvement fees, building codes, and infrastructure availability. Compliance with State mandated requirements, such as the California Environmental Quality Act and California Coastal Commission approvals, may also increase the costs of residential developments. Some of the specific constraints in Ventura County are presented below.

- Clean Air Ordinance for the Ojai Valley

  Development restrictions are placed on land within the Ojai Valley area through the Clean Air Ordinance for the Ojai Valley, which is designed to protect the public health. The Clean Air Ordinance was adopted in 1982 to assist in the implementation of the Air Quality Management Plan (AQMP). AQMP's are required of all jurisdictions in the United States which do not meet Federal air quality standards.

  There is a direct relationship between population growth and air emissions which contribute to the deterioration of air quality in the Ojai Valley. The AQMP has established a maximum rate of population increase which can be accommodated for any given year. Regulation of population growth in the Ojai Valley in accordance with the AQMP is necessary in order to ensure compliance with Federal ambient air quality standards and to adequately protect the public health. For these reasons, building permits issued in the Ojai Valley are restricted.

- Infrastructure Costs and Fees

  The cost of raw land and land improvements is in part dependent on the availability of the service infrastructure. To be suitable for development, a parcel of land must be served by an adequate public water supply, sewers, roads, etc., or there must be a way for developers and local government to provide such facilities. Land which already has the necessary infrastructure is limited in unincorporated areas of Ventura County.

  Since the passage of Proposition 13, local government is unable to finance services and capital expenditures that they traditionally provided for their community's development. This has resulted in a shift of infrastructure responsibility to the private sector to supply the balance which the public sector is unable to provide. Since 1975, there have been major increases in development fees throughout California. A survey of Southern California counties by the Construction Industry Research Board shows that there has been an average fee increase of 218.7%. The major cause of this increase is due to infrastructure/capital improvement fees, charged since 1978, for road, schools parks, sewers, flood control system, etc.

  - Building Permit: This fee covers all the required inspections by the Building and Safety Division of the foundation, framing, plumbing, wiring, etc., and the issuance of Certificate of Occupancy which verifies that the dwelling has met all applicable Building and Safety requirements and Codes.

  As a result of the passage of Proposition 13, the following infrastructure-related fees are charged to developers or builders for new residential developments:

  - Sanitation Fee(s): For those dwellings which utilize a septic system, this fee covers the inspection of the system to assure that it functions properly. For a unit which is connected to a sewer system, the fee is placed in a special fund used to provide additional capital improvements for sanitation service.

- Water Service Fee: This is a one time hook-up fee for the dwelling unit. The fee is used to construct trunk lines to provide water into the area, or, if the lines are already installed, to retire improvement bonds which were used to construct the lines. If the bonds have been retired and the system installed, the fee is applied to maintenance of trunk line(s).

- Flood Control Fee: This fee is assessed on a per dwelling basis to provide for improvements to flood control facilities or structures on a regional basis. These funds are placed in a Flood Control general fund and, when enough money has accumulated, the improvements are made. Alternatively, this fee may be used for operation and maintenance purposes of existing Flood Control facilities.

- Quimby Act Fee: This fee is paid by developers, in lieu of land dedication, to provide local public park land.

- School Facilities Fee: This fee may be collected by the school district to provide adequate temporary facilities for school aged children within the subdivision to alleviate conditions of overcrowding in the local schools.

o Residential Permit Processing Time

The permit processing time can affect the cost of housing by increasing the amount of interest paid while holding the land. In Ventura County most subdivisions and residential projects are approved less than six months after the application is found to be complete for purposes of filing. In the case of more complex subdivisions, where Environmental Impact Reports are required, the time needed to process the application is between nine to twelve months.

o Residential Application Fees

Since the passage of Proposition 13, in 1978, revenues received from property taxes by local governments have been reduced. Consequently, services which were once provided at no charge or at a minimum charge are now offset to a much greater extent by the builder or developer. These costs, in turn, are passed on to the home buyer.

The County collects fees which are intended to defray the costs of permit processing, environmental document preparation, building inspections, and capital improvements. As indicated earlier in Section 3.3.2.6, permits and fees accounted for about 6% of the cost of a typical single-family house in 1980 (this figure has been revised to about 7.5% for all units built in 1983).

3.3.2.7 Federal Housing Programs

o Section 8 Housing Programs (U.S. Housing Act of 1937 as amended)

- Section 8 Rental Certificate Program: The Certificate Program is administered through a contract between the Area Housing Authority and the property owner and a lease between the owner and the tenant. Eligible tenants are required to pay 30 percent of their adjusted monthly income as their rent portion to the owner. The Area Housing Authority pays the balance of the rent.

The units must meet HUD's Housing Quality Standards and be rented at a price which is both reasonable and within the maximum rent limits authorized by HUD ("Fair Market Rent").

- Section 8 Rental Voucher Program: The Voucher Program operates similar to the Certificate Program, except that it establishes a payment standard instead of a Fair Market Rent. Upon location of a unit that meets HUD's Housing Quality Standards and an agreement by the owner to participate in the program, the qualified tenant receives a subsidy from the Area Housing Authority to be applied toward the rent. The tenant is required to pay the balance of the rent. The amount of the subsidy is determined by calculating the difference between the fixed payment and 30 percent of the tenant's adjusted monthly income.

- Aftercare: The Area Housing Authority, under contract with the State of California Department of Housing and Community Development (HCD), administers specially allocated Section 8 Rental Certificates to mentally and physically disabled individuals. Eligible recipients must be participants in a certified outpatient care program.

- Moderate Rehabilitation: This Section 8 Program provides housing assistance payments on behalf of eligible tenants who reside in units that have been rehabilitated by the owners under an Agreement with the AHA. The owner performs specified physical repairs to return substandard dwelling units to decent, safe, and sanitary conditions. Subsequently, a 15-year Housing Assistance Payments Contract is executed with the AHA. This guarantees the owner a rental flow sufficient to pay normal ownership and operating costs, and provide a return on investment as well as to amortize the rehabilitation costs. The AHA is guaranteed that the rehabilitated units will be available for Section 8 eligible households for 15 years.

o Conventional Low-Rent Public Housing Program

This program enables a public housing agency, such as the Area Housing Authority, to develop, own and operate housing for low income families, elderly, handicapped and disabled individuals. Developments are financed through the sale of tax-exempt obligations with principal interest costs being repaid via debt service through annual contributions made by HUD for the benefit of the public housing agency. When all obligations are retired, the development is the sole property of the public agency.

Under the "Conventional" program, the public housing agency acts as its own developer, acquiring the site, preparing its architectural plans, and advertising for competitive bids for the construction. Eligible tenants pay 30 percent of their adjusted monthly income for rent and utilities. HUD allocated operating subsidies provide operating and modernization funds, in addition to income derived from tenant rents, in order to assure long-term, quality, affordable low-income housing. Public housing developments are tax exempt. A payment in lieu of taxes (PILOT) is paid to the local taxing authority based on 10 percent of tenant rents less utility costs.

Because the County obtained Article 34 referendum authority from the voters in 1982, the AHA is able to apply for funds from HUD and build public housing without specific voter approval of each project, up to the limits of the referendum. All applicable local requirements must be met.

- Section 202 - Direct Loans for the Elderly or Handicapped

  This program provides 100%, long-term loans to private non-profit organizations to finance the construction or acquisition of rental or cooperative housing for low income elderly and handicapped. Each Section 202 loan commitment from HUD includes the commitment of Section 8 Housing Assistance Payments funds to provide rent subsidies for all eligible tenants. Section 202 funds are distributed on a geographic basis, and only eight units were authorized in the latest allocation for the region which includes Ventura County.

- Section 106(b) - Assistance to Non-Profit Sponsors of Low and Moderate Income Housing

  Non-profit sponsors of Section 202 housing for the elderly or handicapped (see above) can receive interest-free "seed money" to cover 80% of the preliminary development costs. Loans may be used to meet typical project development costs such as surveys and market analysis, site engineering, architecture fees, site acquisition, and application and loan commitment fees.

- Neighborhoods, Voluntary Associations, and Consumer Protection Office

  This office, which is within the Department of Housing and Urban Development, administers programs which provide grants and other forms of assistance to neighborhood organizations to undertake economic or community development and revitalization projects in low and moderate income areas which have an identifiable neighborhood. These programs have not been recently funded.

- Community Development Block Grant (CDBG) Programs

  Through the CDBG program, HUD provides 100% Federal grants to local jurisdictions with no matching contribution required. Applications for grants must contain a summary of a three-year plan (Housing Assistance Plan) that identifies community development and housing needs, and outlines a comprehensive strategy and operating plan for meeting those needs.

  The CDBG program is intended to emphasize the development of adequate housing and also to provide a suitable living environment and expanded economic opportunity for low and moderate income persons.

  Specific objectives of the program include:

  - the elimination of slums and blight;
  - the increase of the supply of low and moderate income housing;
  - the elimination of conditions which are detrimental to the health, safety or welfare of the population;
  - the conservation of existing housing;
  - the improvement of public services;
  - the rational utilization of land; and
  - the preservation of property with special values.

The County has participated in the CDBG program since 1981. It has been a comprehensive program from which money has been used for the rehabilitation of 32 farm labor homes (Cabrillo Village in Saticoy), the pre-construction costs of a low-income multi-family housing units project and a demonstration "starter home," support of a Fair Housing Program, a weatherization program for low income residents, and financing a community health clinic and housing resource center.

Currently, the County and the Area Housing Authority participate in the CDBG Rehabilitation Programs, which include both the Housing Improvement Program and the Emergency Grant Program.

- Emergency Grant Program: This program provides grants to elderly, low income homeowners for the correction of health and safety dangers, or essential code deficiencies which they could not otherwise afford to correct.

- Housing Improvement Program: This program assists low income homeowners or investor owners by providing a subsidized, with-interest bank loan, or a zero-interest deferred loan directly from the AHA. The funds are used to perform necessary and general property repairs and improvements, to stabilize the housing conditions, and to enhance the neighborhood.

  The County applied for CDBG funds in 1984 to provide a domestic water system to residents of the Piru community who were not being served, and to install a drainage system in the Nyeland Acres community, which has severe flooding problems.

o HOME Investment Partnership Program

HOME Investment Partnership Program is an entitlement program. Ventura County receives funds by formula. Funds can be used for three types of housing programs: Homewownership (for first-time homebuyers and single family rehabilitation), Rental Housing and Tenant-Based Rental Assistance.

Under these three categories, homeownership projects through acquisition of property (including assistance to first-time homebuyers); new construction; reconstruction; conversion; moderate rehabilitation; substantial rehabilitation; tenant-based rental assistance; relocation of any displaced persons, families, businesses or organizations; and site improvement, acquisition of vacant land and demolition. After 1992, local match funds will be required.

o Home Ownership and Opportunity for People Everywhere (HOPE) Program

The HOPE programs authorize planning and implementation grants for programs that assist low and moderate income residents to purchase and convert to homeownership (including cooperative homeownership), multifamily and single housing owned by public agencies. The program funds are allocated on a competitive basis. Local match funds are required for implementation grants.

o Farmers Home Administration

The Farmers Home Administration (FmHA) is an agency within the United States Department of Agriculture which provides credit to low income persons in rural areas (rural areas include open country and places with a population of 10,000 persons or less, that are rural in character and are not closely associated with urban areas).

Areas within the unincorporated County qualify as rural, and a number of programs are available which provide grants and low cost loans for housing for eligible persons. Unlike HUD programs (discussed above) which generally operate through banks and other approved lending institutions, the FmHA itself acts as a lender, making loans directly to qualified recipients.

- FmHA Section 502 - Home Ownership and Rehabilitation Loans: This program provides direct loans to individuals to buy, build, repair, renovate, or relocate a home.

  The interest rate varies between 3% and market rate, according to the applicant's adjusted family income. Loans may be for 100 percent of the cost (eliminating the need for a down payment). The applicant must be able to meet the monthly payment and other expenses, and must be unable to obtain conventional financing at a reasonable rate. The maximum loan repayment period is 33 years. Although the loans have no maximum ceiling, the house must be modest in size, design and cost, and must be owner-occupied.

- FmHA Section 504 - Home Repair Loans: Section 504 provides 1% loans up to $7,500 to very low income families for home repairs which are needed for the health of the family and/or the community. The loans are amortized up to a period of 20 years, depending on the amount of the loan. Some grants are awarded for home repair for persons aged 62 or older.

  Funds may be used for such purposes as connecting the dwelling to water or sewer lines, providing toilet facilities, adding a room, repairing a roof, or making other similar improvements.

- FmHA Section 515 - Rural Rental Housing Program: Section 515 provides loans to public and private (limited profit and non-profit) sponsors for the construction or substantial rehabilitation of rental and cooperative housing for low and moderate income families and elderly persons. The interest rate on these loans varies between one percent and the market rate, depending on the kind of sponsor and the projected income of the tenants. The term of the loan is 40 years.

  Tenants in Section 515 projects may not pay more than 30 percent of their adjusted income for rent and utilities. Section 8 Assistance Payments may be used with Section 515 loans to bring rents within the tenant's ability to pay.

- FmHA Sections 514/516 - Farm Labor Housing Loans: This program provides a combination of grants and loans to finance construction, rehabilitation, or acquisition of rental housing for farmworkers. A grant of up to 90 percent of the cost of the project can be made, with the remainder loaned at one percent. Loans are repaid over a 33-year term.

  Public and private non-profit corporations, State agencies and political subdivisions, and private, non-profit farmworker associations are eligible for both grants and loans. Farmowners, farmowner associations, and grower-oriented non-profit groups are eligible only for loans.

  Housing financed under this section must be operated on a non-profit basis. Unlike housing under other FmHA Programs,

farmworker housing can be situated in an urban location provided there is a nearby farm labor market. HUD's Section 8 subsidies may be used with this program.

- FmHA Sections 523/524 - Technical Assistance Grants for Self-Help Housing and Rural Housing Site Loans: Section 523 provides grants to public and non-profit groups to enable low-income rural residents to build their own homes. The houses are financed under FmHA's Section 502 Program, with Section 523 providing administrative money to the sponsor for hiring counselors and construction supervisors.

  Under the program, a group of families jointly contribute the needed home-building labor, hiring skilled help when necessary. Most grants are made for one or two years, with funds advanced as needed and budgeted for 30-day periods.

  Sites financed with Section 524 loans must be sold to low and moderate income families who qualify for an FmHA loan, or to non-profit organizations eligible for a rural rental or cooperative housing loan. Section 524 loans carry a market interest rate.

3.3.2.8 State Housing Programs

The State Department of Housing and Community Development (HCD) is the agency principally charged with assessing, planning for, and helping communities meet the housing needs of low and moderate income residents of California. HCD administers many programs which serve the purpose of assisting local governments and private non-profit groups, either with technical assistance or through funding, to solve local housing problems. Under the following programs, administered within HCD by the Division of Community Affairs, technical assistance, expertise or information is provided:

- o Special Development Services
- o Rehabilitation Technical Assistance Program
- o California Indian Assistance Program
- o Housing Development Technical Assistance Program
- o Cooperative Housing Assistance
- o State and Local Government Surplus Lands Program
- o Rural Development Assistance Program
- o Technical Assistance for Mobilehome Park Conversions
- o Rural Finance Marketing Program

The following programs, administered by the Division of Community Affairs, offer funding assistance for low and moderate income housing:

- o Deferred Payment Rehabilitation Loan Fund Program

  This program, through a revolving loan, provides funds for deferred payment loans to local governmental agencies or non-profit corporations to rehabilitate housing which is occupied by low and moderate income homeowners or renters.

- o California Housing Advisory Service

  This program provides grants to public agencies or non-profit organizations for the purpose of establishing local Housing Advisory Services to assist individuals and groups with the self-help construction or rehabilitation of their housing.

- Low Income Home Management Training Program

  This program provides grants to public agencies or non-profit organizations for the provision of housing counseling services linked to housing production and rehabilitation efforts. No funds have been allocated to this program, so the program may be discontinued.

- Farmworker Housing Grant Fund

  This program provides up to 50% matching grants to local governmental agencies, non-profit corporations, and cooperative housing corporations for the purpose of developing new or rehabilitated housing for low income agricultural employees who will own or rent the units. Funds are available to applicants who demonstrate that housing is needed for low income farmworkers who would not otherwise have housing. This program can be used in combination with Farmers Home Administration loans. The Cabrillo Economic Development Corporation (a private non-profit corporation serving Ventura County) actively participates in this program.

- Homeownership Assistance Program

  Under this program, HCD provides up to 49% of the purchase price of a dwelling unit in the form of a mortgage participation agreement with an institutional lender in order to enable eligible households to purchase housing which they would otherwise be unable to purchase. When the unit is sold, the State shares in the sales proceeds in an amount proportionate to its original investment. HCD may assist: 1) renters to purchase their unit which is being converted to a condominium; 2) mobile home park residents to purchase their space if the park is to be converted to a condominium or stock cooperative; 3) households to purchase a mobile home placed on a permanent foundation; and 4) stock cooperatives or non-profit corporations to develop or purchase mobile home parks. Contracts may, however, be limited to the purchase of a mobile home which will be placed on a permanent foundation.

- Rental Housing Construction Program

  This program provides funds through local agencies or the California Housing Finance Agency (discussed below), for the development of new rental units by private, non-profit or public agency sponsors. At least 30% of the units in the assisted project must be made available to low and very low income households. In 1983 the Department was authorized to establish and administer an annuity fund and make commitments to provide rent supplement payments from the fund directly to sponsors of rental housing developments financed under the Farmers Home Administration 515 program to ensure affordable rents to eligible households.

- Rural Land Purchase Fund

  This program provides 7% loans to local public agencies and non-profit organizations for the purchase of land in rural areas (some areas of Ventura County would qualify as rural) to develop housing for low income persons. Because it is a revolving fund program, funds are available as payments are received.

- Urban and Rural Predevelopment Loan Funds

  Under this program, two year, 7% loans are provided to local government agencies, non-profit organizations, and cooperative housing corporations for the preliminary cost of developing or rehabilitating assisted housing for low income families, and elderly or handicapped persons. Authorized costs include site acquisition and preparation; legal, architectural, engineering, permit and application fees; and bonding expenses. Loans are not available for construction financing or administrative costs. The aggregate amount to be loaned for purposes other than site acquisition (land option or purchase of real property) cannot exceed $50,000. The Department determines on a case-by-case basis how much can be loaned for site acquisition.

  The interest rate on the loans can be reduced or eliminated if HCD determines that charging the interest would prevent a significant number of persons of very low income from owning or occupying new or rehabilitated assisted housing.

- California Housing Finance Agency Programs

  The California Housing Finance Agency (CHFA) is a State agency which provides financing for the development of low and moderate income housing through the sale of tax exempt bonds. The proceeds are used to: a) provide direct loans for the development of new rental and cooperative multi-family housing for low and moderate income households; b) purchase mortgages from private lenders to enable eligible low and moderate income borrowers to purchase single family homes; and c) finance neighborhood preservation programs by providing loans and insurance for rehabilitation in designated areas.

3.3.2.9 Local Program Options

The options which are available for any local government to lower the cost of housing are as follows:

- Land Supply/Cost

  The availability of land for residential development can partially influence cost. The following local land use regulations and programs determine the amount and location of available residential land, and the intensity at which it can be developed.

  - General Plan Designation: The General Plans of cities and counties prescribe the direction of growth, and the type and intensity of land use which is permitted in order to achieve an orderly and efficient pattern of land use. By amending or revising the General Plan, a jurisdiction can increase the supply of residentially developable land which could, in turn, partially lower the cost of that land.

  - Zoning Designation: Zoning, the most commonly used tool for implementing the General Plan, controls what uses are permitted, what development density is allowed (i.e., how many units per acre), and what development standards (such as set-back, open space, and parking requirements) will be enforced in each zoning district.

Zoning density, in part, determines the land cost per unit. A jurisdiction can partially reduce land costs per unit by increasing the permitted density through re-zoning programs ("up-zoning"), by offering density bonuses for certain residential projects, by requiring that a minimum (as well as a maximum) density be met for residential projects, or by reducing some standards such as parking or open space requirements.

- Surplus Public Lands: Available surplus public lands (State-owned lands, school sites, park sites, etc.) have the potential to be used for low cost of subsidized housing. Unused school sites are usually an excellent source of property for housing and mixed-use development, because infrastructure is in place and public services are close. They are difficult to acquire, however, since a unanimous vote of the local school board is required to declare a site "surplus", and school boards are subject to considerable pressure from the surrounding neighborhood regarding the closing of the school and the use of the land.

  The lands are often available on a lease basis and could be used for permanent or interim housing. This technique can substantially reduce the overall housing development cost, and is advantageous to the local government because surplus lands are placed back on the tax roll, the jurisdiction retains ownership of the property, and the construction of low cost housing is encouraged.

  Local governments could survey and assess the suitability of all public surplus lands for the development of low cost housing. If suitable sites are found, the jurisdiction could then proceed in an attempt to acquire the sites. Two school sites are currently unused in the unincorporated area of Ventura County.

- Land Banking: Land banking refers to the process whereby a local jurisdiction purchases land which would be most suitable for the development of housing. The land is held for sale or lease to a private developer or the Area Housing Authority for the production of affordable housing. Land banking prevents speculation and shields against inflation in land costs.

  In beginning a land banking program, local revenues, revenue sharing funds, Community Development Block Grant or other State or Federal funds could be used to purchase the property. By making the land available at reduced cost, deferring payment, or merely leasing instead of selling the land, the jurisdiction could encourage and manage the development of low income housing. In disposing of or developing the property, the jurisdiction could impose restrictions on use, resale, and redevelopment in accordance with the public interest. The initiation of a land banking program, however, requires a substantial amount of financial involvement by the local government and is probably not feasible in Ventura County without State or Federal assistance.

o Development Standards

Development standards are mandated at the local level so that the public's health, safety and welfare are protected. Some of these standards influence the cost of housing. Each of the following standards can influence the cost of housing and could potentially be changed by local jurisdictions to reduce development costs.

- Zoning Ordinance: Through ordinance revisions, some standards such as required parking or recreation facilities could be reduced, and others could be changed to allow the use of manufactured housing on residential lots, or second dwelling units on single lots.

  In 1983, Ventura County amended the Zoning Ordinance Code to reduce parking requirements, which will effectively reduce housing development costs by an estimated $5,000 to $10,000 per unit. At the same time, the ordinance was revised to allow mobile homes (constructed since 1976) on any suitable residential lot, and to permit second dwelling units (or "granny flats") on single lots.

- Building Code: Some requirements of the building code could be reviewed by the local Building Department to assure the necessity and appropriateness of the existing standards.

- Site Improvement Standards: Improvement requirements and standards such as drainage, street construction, sidewalks, sewers, undergrounding of utilities, lighting and landscaping could be reviewed in terms of cost and benefit, and altered accordingly.

- Energy Conservation Measures: A significant percentage of income spent on housing can be attributed to home energy consumption. Space heating requirements in Ventura County are not as severe as they are elsewhere, but heating bills still substantially add to monthly housing costs (approximately $55/month for forced air heating, four hours per day). Water heating bills and water use bills also contribute to higher monthly housing payments.

  Local governments have several options available which could lead to a reduction in energy consumption. At a minimum, the State's residential energy conservation standards should be enforced by the local building and safety department as they are stringently enforced in Ventura County. Furthermore, an Energy Conservation Element to the General Plan or an energy conservation ordinance could be prepared. Energy conservation policies and programs could then be implemented which are best suited for the particular jurisdiction. In 1983, Ventura County adopted a Water Conservation Management Plan which is a voluntary plan with many measures aimed at reducing water usage.

o Administrative Costs

The following factors associated with subdivision and permit processing could partially reduce the cost of housing:

- Permit Processing Time: The time taken to process a permit can add to the cost of housing development, because there are high financing charges while the land is being held. "Fast tracking" is a mechanism which could be used for processing affordable housing projects. It accelerates processing time, thereby potentially reducing cost for those projects, but the disadvantage is that other projects would take longer to process. Additionally, if a project becomes controversial or is contested (as many "affordable" housing projects are) the processing time can be substantially slowed.

- Permit Processing Fees: The cost incurred by local government for permit processing and project review is generally the responsibility of the developer or applicant so it is not assumed by the general taxpayer. These developer/applicant fees could conceivably be reduced, waived or deferred for "affordable" housing projects. Unless other funding sources are available, however, the cost would have to be borne by the general taxpayer through the County general fund. Therefore, it would only be feasible to reduce fees for truly affordable housing.

- Environmental Review: Any project (as defined by CEQA) constructed in California requires that an appropriate environmental document be prepared. A Master Environmental Assessment (MEA) could be prepared by a local government to be used as a resource for future environmental review of projects. This effort would potentially save both time and money on residential projects. The source of funds necessary to prepare an MEA, however, would have to be addressed, and preparation of an MEA does not preclude a subsequent environmental document from being prepared for the specific project.

o Preserving Affordability

Local governments also have ways to preserve affordability. Some of these techniques follow:

- Deed Restrictions: Deed restrictions, imposed by local government, can be used to control the resale price of affordable units, guaranteeing the continuation of affordability.

- Rent Stabilization: Rental rates increase when there is a shortage of available rental units. Rent stabilization techniques protect renters from dramatic rent increases. Regulation methods include fixed rent ceilings, limits on the rate of rent increase, limits on rents based on a limited rate of return formula, or rent increases limited to operating cost increases. The advantage of regulation is maintained affordability in the rental market, but the disadvantage is that landlords and investors are deterred from expanding rental opportunities because of the lack of profit. Currently, in the unincorporated County, there is a mobile home rent regulation program whereby a rent review board reviews, and votes on, requests for rental increases by mobile home park owners. Requests for rent increases above "allowable" increases must be justified by the owners.

- Homeownership Assistance

  Local governments also have ways of assisting households in purchasing a house. The following paragraphs describe two available options:

  - Mortgage Revenue Bond Financing: Mortgage revenue bond financing is a technique by which a city or county issues tax exempt bonds and the proceeds are used to provide below-market, interest rate loans to qualified buyers. In 1982, the County established an MRB program. Two separate bond issues were implemented in the principal amounts of $36.2 million (in May of 1982), and $33.8 million (in December of 1982). Loans are made available to first-time home buyers at interest rates near 11.2% and with graduated monthly payments.

  - Equity Sharing: Equity sharing is an ownership program that allows a private organization or public body to participate as an equity partner with eligible lower income households. The household provides the down payment and amortization of an amount of the sales price for which the household income qualifies. The remaining funds necessary to purchase the unit are provided by the co-investor, who in turn shares proportionately in the appreciation of the unit. This homeownership technique initially requires a substantial financial involvement by the equity partner. It would probably not be feasible in Ventura County without State or Federal assistance, because funds would otherwise have to come from the County general fund.

- Programs for the Homeless

  A study sponsored by United Way of Ventura County suggested that principal need among the homeless is for "transitional housing," shelter that can house the homeless for two weeks to two months.

  There is some emergency shelter already available on an overnight need, but there is a need for low-cost shelter for up to six months that could enable the homeless to develop the resources to get a home of their own.

  There has also been a shift from Federal to local responsibility for services to the homeless. The United Way believes many services can be effectively provided by the local sector. Some suggested solutions are "respite houses," developed open space that would provide safety and utilities to those who make their homes in vehicles, residential hotels for temporary accommodations, dormitory arrangements, and a rental assistance revolving loan fund (already in existence). Although there are some emergency shelter facilities available throughout the County, there are too few of them, and they lack adequate showers, laundry, medical facilities and day care for children of working parents.

- Housing Trust Fund

  A housing trust fund is a program used to establish a pool of capital for the development of affordable housing. The pool is created from funding sources separate from the local

government's tax base. This can be especially appealing to a local jurisdiction, because it does not burden their general fund.

Linkage fees and setaside funds are among the funding sources which can be utilized to establish a housing trust fund. Linkage fees are fees imposed on employment generating developments as a means of generating revenue to finance housing programs in order to offset the increased demand for affordable housing.

Another funding source which can be used to finance affordable housing programs are setaside funds. Pursuant to State law, 20 percent of all tax increment revenues generated by redevelopment agencies must be set aside for affordable housing activities. In Southern California (SCAG region) setaside funds total over $200 million and make up the largest resource to assist in funding affordable housing programs.

Housing trust fund programs utilizing linkage fees and setaside funds have been established nationwide. In California, eight cities and one county are utilizing these monies to finance affordable housing. These programs are reporting reasonable success in generating funds to develop affordable housing units. In addition, there is no evidence that these programs have significantly affected the real estate market or slowed non-residential development.

Housing trust fund programs are proving to be a viable funding approach to local governments as they struggle to meet affordable housing needs.

3.3.2.10 Previous Housing Element Evaluation

Sections 65588 (a) and (b) of the State Government Code state that the Housing Element should evaluate the results of the previous element. This section describes the housing goals, objectives, policies, and programs of the previous housing element (1984) and provides a discussion of the progress of their implementation. In addition, this section indicates whether the housing goals, objectives, policies and programs of the 1984 Housing Element have been included, changed or deleted in the current Housing Section of the Goals, Policies and Programs document of the General Plan.

o Housing Preservation

Goals/Objectives: The housing preservation goal set forth in the previous housing element, was to "preserve the condition of the existing housing stock and the affordability of all affordable units." Objectives to realize the above goal included:

- "Encourage the physical maintenance of the existing housing stock, especially mobile homes and multi-family rental units."

- "Assure the continued affordability of the existing affordable housing stock."

- "Assure, where feasible, the replacement of affordable units in the Coastal Zone."

To meet the objectives listed above, the County established six policies/programs. A description of these policies/programs and the progress of their implementation is provided in the following section.

The Housing Section of the Goals, Policies and Programs document of the General Plan, includes the objectives outlined above as goals 3.3.1-3.(1) through (3) in order to continue Ventura County's commitment to preserve the existing housing stock.

Policies/Programs: The 1984 Housing Element identified six housing preservation policies/programs to meet the goal and objectives stated above. The policies/programs are described below:

(1) "Continue the enforcement of zoning, building and safety, public health and fire codes by the appropriate County agencies on a compliant or voluntary request basis, and improve the communication regarding these matters between appropriate County agencies and the Area Housing Authority in order to preserve the existing housing stock."

Ventura County continues to implement this program on an ongoing basis. The County has in place existing code enforcement programs in order to facilitate the physical maintenance of the existing housing stock. This program is included in the current Housing Section of the Goals, Policies and Programs document of the General Plan, as program 3.3.3-3.(1).

(2) "Continue the existing program to apply for CDBG or other funds to assist households with housing code violations (i.e. building and safety, fire, or public health) to repair, replace, or otherwise bring the housing unit into conformance with the code."

This program continues to be implemented on an ongoing basis. The County of Ventura has continued to receive CDBG funds or apply to other funds in order to facilitate the physical maintenance of the existing housing stock. This program is included in the current Housing Section of the Goals, Policies and Programs document of the General Plan, as program 3.3.3-3.(2).

(3) "Continue the Mobile Home Park Rent Review Program to assure that the amount of rent does not increase more than set forth in the Mobile Home Park Rent Review Ordinance."

This program has been administered by the Planning Division on an ongoing basis in order to assure the continued affordability of the existing affordable housing stock, specifically mobile homes. An annual report is prepared to assess the effectiveness of the program. In addition, the Mobile Home Park Rent Review Ordinance is a sunset ordinance and is re-enacted every three years.

This program is included in the Housing Section of the Goals, Policies and Programs document of the General Plan, as program 3.3.3-3.(3).

(4) "Prepare and implement an ordinance for the unincorporated areas of the Coastal Zone (as required by the Government Code), so that low and moderate income housing units are replaced when converted or demolished."

During the five-year planning period (1983-1988) of the previous Housing Element, approximately 19 units serving low and moderate income households were removed and replaced with 22 new low and moderate income units in the Coastal Zone.

The County did not prepare an ordinance to ensure replacements of low and moderate income housing during the five-year planning period. However, in light of this shortcoming the Housing Section of the Goals, Policies and Programs document of the General Plan includes policy 3.3.2-2.(2) in order to ensure that affordable housing in the Coastal Zone is replaced when demolished or converted. Since all demolitions in the Coastal Zone require a discretionary permit, this policy has the same effect as an ordinance.

(5) "Establish a resale control mechanism designed to assure the long-term affordability of units specifically sold as "affordable" and that are in developments which were granted a density bonus or other incentive. The mechanism for the sale or resale process should include:

- A mechanism for selecting and qualifying eligible households (qualifications should be based on a percentage of the median income in the County adjusted for family size).

- A mechanism for determining resale price (it should be based on the original selling price), plus value of improvements added by the owner, plus an increase in value based on the Countywide median income published by HUD.

- A deed restriction which gives first right of refusal to the Area Housing Authority or its assignee."

A Zoning Ordinance Amendment was adopted in 1986 to assure the long-term affordability of units that are sold as "affordable". The requirements of the above policy/program are continued through policy 3.3.2-4.(4) of the Housing Section of the Goals, Policies and Programs of the General Plan, as well as Article 16 of the County Zoning Ordinance.

(6) "When Area Plans are updated or amended, discourage the conversion of existing residentially developed areas to other land uses."

The County continues to implement this policy on an ongoing basis as Area Plans are developed or updated. Area Plans are required to be consistent with the Countywide General Plan and other County policies. Based on this, the above policy/ program which discourages the conversion of existing residentially developed areas to other land uses, is considered when Area Plans are updated or amended. In addition, policy 3.3.2-2.(1) has been included in the current Housing Section of the Goals, Policies and Programs document of the General Plan in order to preserve the existing housing stock.

- Housing Rehabilitation

  Goals/Objectives: "Improve the condition of existing substandard housing and housing otherwise in need of rehabilitation" was cited as the Housing Rehabilitation goal in the previous housing element. To attain this goal the following objectives were identified:

  - "Continue and expand the existing housing rehabilitation programs."

  - "Promote the improvement of housing by supporting existing energy conservation and weatherization programs."

  The Housing Rehabilitation objectives listed above identified the need to rehabilitate dwelling units which do not have plumbing as well as the need to identify areas where rehabilitation of units would be beneficial.

  The policies/programs described below were identified in the previous Housing Element to meet these objectives. In addition, the Housing Section of the Goals, Policies and Programs document of the General Plan includes goals 3.3.1-4.(1) and (2) to improve the condition of substandard housing.

  Policies/Programs: The 1984 Housing Element identified two Housing Rehabilitation policies/programs, in addition to policies/programs (1) and (2) of the Housing Preservation Section, to meet the goals and objectives listed above. The policies/programs are described below:

  (1) "Continue existing housing rehabilitation programs and apply for additional State and Federal funds for the rehabilitation of owner and renter occupied housing units. The funds should be used to improve substandard units which are located in the unincorporated area of the County."

  This program continues to be implemented on an ongoing basis. The Area Housing Authority administers the housing rehabilitation program utilizing CDBG funds and program income from previous loans. Between 1983 and 1988, approximately 34 homes were rehabilitated in the unincorporated area of Ventura County. The average cost to rehabilitate the homes was approximately $5,000.

  This program is included in the Housing Section of the Goals, Policies and Programs document of the General Plan, as program 3.3.3-4.(1).

  (2) "Contribute to the affordability of both rental and ownership housing by supporting the existing energy conservation and weatherization programs administered by the Commission on Human Concerns (CHC) or other entities for existing housing units."

  The energy conservation and weatherization programs continue to be primarily administered by the CHC. The State Department of Economic Opportunity and the Southern California Gas Company also contribute to this program. Between 1983 and 1988, approximately 9,580 homes countywide were weatherized by these agencies. To continue improving the energy and weather efficiency condition of housing,

this program is included in the Housing Section of the Goals, Policies and Programs document of the General Plan as program 3.3.3-4.(2). The Housing Section also includes a policy to coordinate its housing rehabilitation programs with other public and private agencies (See policy 3.3.2-3).

o Housing Opportunities

Goals/Objectives: The Housing Opportunity goal identified in the previous Housing Element was "to increase housing opportunities for persons of all income levels, with special emphasis on low and moderate income person, including the elderly, single-headed households, large families, farmworkers, handicapped and homeless." The objectives set forth to promote housing opportunities include:

- "Strive to maintain at least a 3% vacancy rate in both rental and ownership housing Countywide."

- "Provide 1,227 privately constructed, upper income housing units in the unincorporated area of Ventura County by 1988."

- "Provide 603 privately constructed, moderate income housing units in the unincorporated area of Ventura County by 1988."

- "Provide 702 privately constructed, low income housing units in the unincorporated area of Ventura County by 1988."

- "Provide 513 very low income housing units in the unincorporated area of Ventura County by 1988."

- "Facilitate the construction of housing which is suited to the needs of all low income groups, (i.e. farmworkers, elderly, handicapped, single-headed families, large families or homeless)."

- "Assist low and moderate income households to purchase or rent homes."

- "Provide affordable housing unit opportunities in the unincorporated areas of the Coastal Zone."

In 1987, according to the Federal Home Loan Bank of San Francisco, the market vacancy rate for the unincorporated area of Ventura County was 1.5%. Likewise the market vacancy rate for the entire County was 1.5%. This rate fell short of the 3% vacancy rate objective identified in the previous Housing Element.

During the period of the previous Housing Element, the County's tracking and data base system did not include affordability characteristics. Due to the unavailability of this information, affordability assumptions were utilized for reporting the progress in meeting the housing objectives. The following assumptions were utilized:

- Single-family, detached units are generally targeted for upper-income households.

- Single-family attached units are generally targeted for moderate-income households.

- Second dwelling, mobilehomes, and multi-family units are generally targeted for low-income households.

- Public assisted units and farmworker-caretaker units are generally targeted for very low-income households.

Between 1983 and 1988, approximately 1,538 single-family detached housing units were constructed in the unincorporated area of Ventura County. Based on the above assumption that single-family detached units are generally targeted for upper-income families, the objective for upper income families (1,227 units) was exceeded by 311 units.

During the 1983-88 planning period, approximately 200 single-family attached units were constructed in the unincorporated area of Ventura County. This number met 33% of the moderate-income housing objective of 603 units.

Approximately 671 units to serve low-income families were constructed during the planning period. Between 1983 and 1988, 214 second dwellings or "granny flats" and 331 multi-family units were constructed. In addition, 63 mobile homes were installed. Two projects, comprising 63 units specifically targeted for low-income families were also approved and constructed during this time period. Of the 63 units, approximately 18 were senior units. Based on this, the County met 95% of the low-income housing objective of 702 units.

Between 1983 and 1988, approximately 250 units targeted for very-low income families were approved or are under construction. In 1986, the County Board of Supervisors approved two projects, comprising 128 units. Of these, 100 provide housing for farmworker families. In addition, a 122 multi-family housing project is under construction in Saticoy. Based on this, the County met approximately 50% of the very low-income housing objective of 513 units.

In addition, the County established policies/programs to facilitate the construction of housing which will be suited to the needs of all low income groups, to assist low and moderate income households to purchase or rent homes, and to provide affordable housing unit opportunities in the unincorporated areas of the Coastal Zone in the 1984 Housing Element. A description of these policies/programs and the progress of their implementation is included in the Policies/Programs section below.

The overall goal of increasing housing opportunities for persons of all income levels has been included in the Housing Section of the Goals, Policies and Programs of the General Plan as goal 3.3.1-5. In addition, the Housing Opportunity objectives listed above have been incorporated in the Housing Section as goals 3.3.1-5.(1) through (8). Further, the housing objectives identified in the Housing Section of the General Plan reflect the Southern California Association of Governments (SCAG) Regional Housing Needs Assessment numbers (1989-1994).

Policies/Programs: The 1984 Housing Element identifies thirteen policies and programs to meet the Housing Opportunities goals and objectives described above. The policies/programs are described below:

(1) "Ensure that Area Plans are consistent with Federal and State programs and that they attempt to accomplish the following:

- Increase density, where appropriate, to reduce the cost of land per unit.

- Ensure an appropriate mix of residential densities.

- Redesignate, where appropriate, any non-residential land which is determined to be excess to a residential land use designation in order to increase the land available for housing.

- Discourage the conversion of existing residentially developed or designated areas to other land uses.

- Ensure that there is enough residential land to meet planned employment opportunities and that there is a balanced amount of commercial, industrial and residential land use designations.

- Develop a Master Environmental Assessment or Environmental Impact Report for the area encompassed by the Area Plan which could reduce processing time associated with subsequent environmental documents for residential projects."

This policy/program continues to be implemented by the County on an ongoing basis as Area Plans are developed or updated. The County requires Area Plans to be consistent with the Countywide General Plan and other County policies. Based on this, the above policy is considered when developing or updating an Area Plan. In addition, this policy has been included in the Housing Section of the Goals, Policies and Programs document of the General Plan as Policy 3.3.2-4.(1).

(2) "Increase the land available for the construction of low income housing units, when funds are available, by making available (through purchase or lease) surplus, publicly owned land (including Federal and State owned land), or other available sites."

This policy/program continues to be implemented by the County on an ongoing basis. This policy has been included in the Housing Section of the Goals, Policies and Programs document of the General Plan as policy 3.3.3-4.(3). The policy has been modified in order to provide first opportunity at available land to the Area Housing Authority.

(3) "Continue the ongoing program to review, evaluate and modify zoning and development standards, where appropriate, to reduce development costs. Priorities for review should be jointly established by the County and the building industry."

This program continues to be implemented by the County of Ventura on an ongoing basis. As a result, the following changes to development standards have been made:

- The requirement for two garage parking spaces per dwelling was amended to allow two covered (i.e. carport) spaces per dwelling in lieu of a garage.

- Mobile homes are now allowed as a single-family residence in zones where single-family dwellings are allowed.

- Second dwellings are now allowed in single-family zoning districts, provided that the second dwellings do not exceed specified limitations on gross floor area and provided that certain setback limitations are met.

This program has been included in the Housing Section of the Goals, Policies and Programs document of the General Plan as program 3.3.3-5.(1).

(4) "Offer a 25% zoning density bonus for residential projects which provide a minimum of 1) 25% of the units for low and moderate income households, 2) 10% of the units for lower income households, or 3) 50% of the units for senior citizens households. These units should have strict resale or rental controls attached to them."

As previously mentioned, Article 16 of the County Zoning Ordinance was adopted in 1986, in order to encourage the construction of housing for the elderly or low and moderate households. The Housing Section of the Goals, Policies and Programs document of the General Plan, includes policy 3.3.2-4.(4) and (5) and programs 3.3.3-5.(7) and (8), which provide for the continued implementation of Article 16 and Article 19 of the County Zoning Ordinance.

Article 16 was modified to be consistent with changes in State law. According to State law, moderate income housing projects no longer are eligible to receive a density bonus and other development incentives as specified under Section 65915 of the Government code. Eligible developments will include lower income and senior units. A qualified lower income and senior housing development must include at least five dwelling units and provide (1) 20 percent of the total units of the housing development for sale or rent to lower income households, or (2) 10 percent of the total units of a housing development for sale or rent to very low income households, or (3) 50 percent of the total units of a housing development for sale or rent to senior households. The affordability maintenance requirement must be extended from 16 years to 30 years in certain situations.

In addition, the County prepared Article 19 of the Zoning Ordinance which, like Article 16 offers density bonus or other development incentives in order to encourage condominiums affordable to lower and moderate income households. A qualified condominium conversion project must include at least five dwelling units and provide (1) 33 percent of the total units of the condominium conversion project for sale to moderate income households, or (2) 15

percent of the total units of the condominium conversion project for sale to lower income households. The affordability maintenance requirement for condominium conversion projects is 30 years.

(5) "Develop an inclusionary housing ordinance for the Coastal Zone as required by the Government Code to ensure the availability of affordable housing."

An inclusionary housing ordinance was not developed by the County. In addition, this program was not included in the Housing Section of the Goals, Policies and Programs document of the General Plan because the Government Code does not require inclusionary housing ordinances. Moreover, an inclusionary housing ordinance could be legally challenged because it cannot show a nexus (cause and effect) relationship between proposed housing and the requirement for "affordable" housing units.

(6) "Establish a priority processing procedure which will reduce processing time of low income housing projects to reduce the developer's holding costs for land which directly affects the final cost of housing."

This policy/program was not established because it was found that all of the project processing steps as required in Ventura County were necessary to comply with State laws and no steps could be reasonably eliminated. In addition, the Building Industry opposed preferential treatment of "affordable" housing projects at the expense of conventional housing. This program was not included in the Housing Section of the Goals, Policies and Programs document of the General Plan.

(7) "Continue to apply the existing reimbursement procedure for original developers of major capital improvements."

The County requires that developers provide for necessary capital improvements prior to development. On occasion, the improvements may benefit other property owners in an area, who could subsequently develop their property, but not have to pay for the facility improvements.

Guided by Sections 66483 and 66485 of the Government Code, the County has on occasion established reimbursement programs to defray costs of constructing drainage facilities within Ventura County. In these instances, the County has required that the original developer advance the funding to create a local drainage area. Subsequent developers within this area are required to pay a fee for the drainage facility improvements. A portion of the fee is reimbursed to the original developer. Reimbursement programs have also been established by special districts (i.e. Flood Control and Waterworks Districts) in order to levy and collect fees from properties benefitting from improvements.

Reimbursement programs are not always feasible for all major capital improvements. However, when reimbursement programs are established, the County adheres to the reimbursement provisions of the Government Code.

Therefore, this policy/program is not included in the Housing Section of the Goals, Policies and Programs document of the General Plan.

(8) "Expand the existing Mortgage Revenue Bond Financing Program and initiate a Multi-Family Bond Financing Program to provide low and moderate income housing in the County."

This program continues to be administered by the County on an ongoing basis in order to facilitate low and moderate income housing. The County of Ventura initiated two housing bond issues (1982) to assist first time home buyers. Issue I was for the principal amount of $36.2 million and has subsequently been retired. Bond Issue II is currently being implemented by the County. The principal amount of this issue is $33.8 million. This program has been included in the Housing Section of the Goals, Policies and Programs document of the General Plan as program 3.3.3-5.(2).

(9) "Continue to apply for Federal and State funds and grants to the fullest extent possible in order to develop affordable owner-occupied and rental housing for low and moderate income households, and for those with identified special needs (farmworkers, elderly, handicapped, homeless). Encourage and support other housing agencies and non-profit organizations concerned with housing to apply for all available funds for low and moderate income households and for those with identified special needs."

This program continues to be implemented by the County on an ongoing basis. The County has continued to apply for CDBG funds in order to facilitate the development of affordable housing.

For the past ten years Cabrillo Economic Development Corporation (CEDC), a non-profit organization in Ventura County, has actively participated in providing affordable owner-occupied and rental housing for low and moderate income households, as well as groups with identified special needs. Since 1981, the CEDC has received approximately $718,000 in CDBG funds from the County of Ventura. During the planning period of the previous housing element (1983-1988), the CEDC received $345,000 to provide affordable housing in the County. The CEDC has utilized these funds as seed monies to initiate development of approximately 328 low and moderate-income units. A breakdown of these units include, 62 low-income units, 89 low-income farmworker units, 150 low-income senior units and 27 moderate-income units.

This program has been included in the Housing Section of the Goals, Policies and Programs document of the General Plan as program 3.3.3-5.(3). In addition, policy 3.3.2-4.(2) of the Housing Section states that the County shall give priority in providing housing assistance to those groups with demonstrated special needs, such as the elderly, handicapped, large families, single-headed households, farmworkers and the homeless was included to promote housing opportunities for persons with special needs.

(10) "Continue the Section 8, Housing Assistance Payments Program to provide subsidies to eligible low income households."

This program continues to be implemented by the Area Housing Authority on an ongoing basis. Currently, the Area Housing Authority provides rent subsidies to 1,736 low income households through the Section 8 program. This program has been included in the Housing Section of the Goals, Policies and Programs document of the General Plan as program 3.3.3-5.(4).

(11) "Form a task force committee comprised of city and county agencies and other public agencies interested in and involved in housing for the homeless. The committee will be charged with studying the number of homeless persons in the County and seeking feasible and effective ways of housing them, and researching the funding sources available to deal with the problem."

The Commission on Human Concerns formed the task force in 1984. This task force later merged with the Ventura County Homeless Coalition since many of the task force members were also members of the Coalition. A survey of homeless persons was conducted in 1984 by the Coalition. The survey revealed that there are approximately 5,000 homeless persons in Ventura County at any given time. To continue seeking feasible and effective ways of housing the homeless, a program has been included in the Housing Section of the Goals, Policies and Programs document of the General Plan as program 3.3.3-5.(5).

(12) "Develop alternative procedures for, and report back to the Board of Supervisors on, the deferment of processing fees for low and moderate income housing projects."

The County has not developed this alternative procedure. Generally, the cost for processing a permit is incurred by the developer, so that it is not assumed by the taxpayer. Unless alternative funds are available, the costs of deferred processing fees for "affordable" units would be incurred by the general taxpayer through the County general fund. Although this policy/program was not developed, the Housing Section of the General Plan includes program 3.3.3-5.(6), which calls for a study to be conducted regarding deferment of processing fees for low and moderate income housing projects.

(13) "Develop alternative procedures for, and report back to the Board of Supervisors on, the deferment of improvement fees, which are under the purview of the County for low and moderate income housing projects."

As required by Section 66007 of the Government Code, the County of Ventura defers improvement fees until the date of final inspection or the date the certificate of occupancy is issued, whichever is first for residential developments.

Although, the County follows the requirements set forth by Section 66007 of the Government Code regarding improvement fee deferments, the Housing Section of the General Plan

includes program 3.3.3-5.(6), which calls for a study to be conducted regarding deferment of improvement fees for low and moderate income housing projects.

o Housing Diversity

Goals/Objectives: "Promote a diversity of housing types, tenure, and price" was cited as the Housing Diversity goal in the 1984 Housing Element. To achieve this goal the County identified three objectives. The objectives included:

- "Increase the number of multi-family rental units in areas which have a disproportionately high percentage of single-family housing units."

- "Strive for an equal distribution of housing types and prices throughout the unincorporated County."

- "Promote the utilization of manufactured homes in the unincorporated County where economically advantageous."

In 1985, the County Zoning Ordinance was amended to allow mobile homes and manufactured homes as single-family residences. Prior to this change, mobile and manufactured homes were allowed only as accessory dwellings (e.g. caretaker).

In addition to the policies/programs listed under the Housing Opportunity Section, the 1984 Housing Element established two policies/programs to meet the objectives identified above. A description of these policies/programs and the progress of their implementation are provided in the following section.

The Housing Diversity goal remains the same as in the 1984 Housing Element. The objectives listed above have been incorporated as goals 3.3.1-6.(1) through (3) in the Housing Section of the Goals, Policies and Programs document of the General Plan.

Policies/Programs: The previous Housing Element identified two policies/programs in order to promote housing diversity. The policies/programs are described below:

(1) "Amend the Zoning Ordinance to require minimum (as well as maximum) housing densities in the Residential Planned Development subzones."

In 1986, the Zoning Ordinance was amended to require a minimum project density of 60% of that specified under the Residential Planned Development subzone. This policy/program is no longer appropriate, since the County Zoning Ordinance was amended to reflect the above requirement.

(2) "Study the possibility of offering additional density bonuses or other incentives to encourage the construction of low and moderate income multi-family rental units."

Article 16 of the County Zoning Ordinance was adopted in 1986, to encourage the construction of affordable/elderly housing. In addition, Article 16 must reflect State law changes. Moderate income housing developments are no longer eligible to receive bonus density or other

development incentives. Bonus density and other development incentives will be offered to lower income or senior housing projects. A qualified lower income or senior housing development must include at least five dwelling units and provide (1) 20 percent of the total units of the housing development for sale or rent to lower income households, or (2) 10 percent of the total units of housing development for sale or rent to very low income households, or (3) 50 percent of the total units of a housing development for sale or rent to senior households. In addition, the affordability maintenance requirement for the units is extended from 16 years to 30 years.

The Housing Section of the Goals, Policies and Programs document of the General Plan includes policy 3.3.2-4.(4) and program 3.3.3-5.(7) in order to promote housing diversity.

- Housing Equality

Goals/Objectives: The Housing Equality goal identified in the 1984 Housing Element was "to promote housing opportunities for all persons regardless of race, religion, sex, marital status, age, ancestry, national origin, color, or socio-economic status." One objective was cited to promote housing equality. It states that the County will "attempt to eliminate discrimination in housing by supporting Federal, State and local fair housing laws and policies."

The 1984 Housing Element established policies/programs to meet the objective listed above. A description of the policies/programs and the progress of their implementation is provided in the following section.

The Housing Section of the Goals, Policies and Programs document of the General Plan also identifies the promotion of housing opportunities for all persons as the overall Housing Equality goal (See Goal 3.3.1-7). The objective listed above is incorporated as goal 3.3.1-7.(1).

Policies/Programs: The 1984 Housing Element identified one program to promote housing equality:

"Continue the Fair Housing Program to provide a full range of services including counseling and referral, affirmative action, publications relative to fair housing laws, and tenant-landlord rights."

The Commission on Human Concerns (CHC) is the responsible agency charged with implementing this program on an ongoing basis. As of 1986, the Fair Housing Program was discontinued due to unavailability of funds, however, the CHC has continued to provide Landlord/Tenant fair housing assistance through its Legal Services component. Between 1983 and 1988, CHC's Legal Services served 7,440 households countywide. The Area Housing Authority operates a Fair Housing and Counseling Program which provides essentially the same services as the CHC's Fair Housing Program. These services are provided to more than 2,000 persons annually.

The Housing Section of the Goals, Policies and Programs document of the General Plan includes program 3.3.3-6 in order to promote

housing equality in the County. In addition, the Housing Section includes policies 3.3.2-5.(1) and (2) to promote and encourage housing equality in Ventura County.

- Other General Plan Elements and County Policies

  Goals/Objectives: The previous Housing Element set forth the following goal: "Ensure that the Housing Element and new housing developments are consistent with the goals, objectives and policies of the various elements of the General Plan and County adopted plans and policies, and ensure that Area Plans are consistent with the goals, objectives, and policies of the Housing Element." The objectives outlined to meet the above goal included:

- "The goals, objectives, and policies of the other elements of the General Plan and other adopted County plans should be considered at the time of permit application for housing development, especially with regard to the following:

  - Consistency with adopted population forecasts
  - Balance of residential development with employment opportunities
  - Preservation and conservation of natural resources
  - Recognition of environmental hazards and constraints
  - Preservation and promotion of community character
  - Availability of existing and planned infrastructure and urban services"

- "Area Plans should be consistent with the goals and objectives of the Housing Element, as they are developed or updated."

In order to meet the objectives listed above, the previous Housing Element set forth policies/programs. A description of these policies/programs and the progress of their implementation is provided in the following section.

The Housing Section of the Goals, Policies and Programs document of the General Plan includes goals 3.3.1-6.(1) and (2) to ensure consistency between the Countywide General Plan elements and other County policies.

Policies/Programs: The 1984 Housing Element identified two objectives to ensure consistency between the Housing Section and other General Plan elements and County policies. These policies/programs are described below:

(1) "Review residential housing developments entitlement for consistency with all elements of the General Plan and other County adopted plans and policies."

The County continues to implement this policy on an ongoing basis. All permit applications are reviewed for consistency with the General Plan and other County policies during permit processing in order to make findings of

approval. The Housing Section of the Goals, Policies and Programs document of the General Plan includes policy 3.3.2-6.(2) to ensure consistency.

(2) "As Area Plans are prepared or updated, the goals, objectives, policies and programs of the Housing Element should be incorporated."

The County continues to implement this policy as Area Plans are developed and updated. Area Plans must incorporate the goals, objectives, policies and programs of the Housing Element in order to be consistent with the General Plan.

The Housing Section of the Goals, Policies and Programs document of the General Plan includes policy 3.3.2-6.(1) to ensure that the goals, objectives, policies and programs of the Housing Element are incorporated.

o Housing Element Update

Goals/Objectives: "Ensure the Housing Element is kept up to date" is cited as the Housing Section Update goal. To realize this goal the following objective was set forth:

"Keep the Housing Element current by updating population data on an ongoing basis and by reassessing the goals, objectives and policies of the element, and evaluating the effectiveness of the element's implementation programs every five years."

The 1984 Housing Element established policies/programs in order to meet the objective listed above. A description of the policies/programs and the progress of their implementation is provided in the following section.

The Housing Section of the Goals, Policies and Programs document of the General Plan includes goal 3.3.1-9, which provides for the Housing Section update every five years.

Policies/Programs: The previous Housing Element identified two policies/programs to ensure the update of the Housing Element. These policies/programs are described below:

(1) "Expand the existing Development Monitoring Program to monitor housing and population trends, and periodically reassess the County's housing needs, objectives and implementation programs."

The County continues to implement the Development Monitoring (DM) Program. The DM program tracks residential development from the time plans are submitted through plan approval, recordation and eventual build-out. The program monitors the number and type of dwelling units for tract maps, parcel maps, and other land divisions. This data is used to determine consistency with the Air Quality Management Plan (AQMP), 208 Water Quality Management Plan, population and dwelling unit projections, transportation planning programs, and for other planning purposes.

In addition, the County prepares a General Plan Annual Report which assesses the status of the General Plan and the progress in its implementation. This report also includes Ventura County's progress in meeting its share of the regional housing needs.

As required by State law, the Housing Element must be updated every five years, or as necessary. The County prepared the update to the 1984 Housing Element in 1988, with minor changes in 1992. The next comprehensive update is required by July 1994.

Policy 3.3.2-7 and program 3.3.3-7.(1) and (2) are included in the Housing Section of the Goals, Policies and Programs of the General Plan to ensure the periodic revisions of the County's housing needs, objectives, and implementation programs.

(2) "Update the Housing Element by 1988."

The 1984 Housing Element was revised in 1988, and subsequently in 1992. In accordance with the five year statutory cycle prescribed by State law, the next comprehensive update of the Housing Section of the General Plan must be completed by July, 1994.

o Conclusions

The goals, policies and programs contained in the current Housing Section of the General Plan are essentially the same as those contained in the 1984 Housing Element, with the exception that they have been updated to include new housing needs objectives for the planning period 1988 to 1994. In addition, the majority of the goals, objectives, policies and programs established in the previous element remain ongoing programs. Further, as indicated by the above evaluation of the previous housing element, the County has been reasonably successful in achieving the goals and objectives and implementing the policies and programs which were established in 1984.

Although significant changes to the goals, objectives, policies, or programs were not proposed as part of the current update cycle, the County will continue to reassess the Housing Section of the Goals, Policies and Programs document and the Land Use Appendix of the General Plan on an ongoing basis. The next five year review is scheduled for July 1994.

3.3.2.11 Coastal Zone Housing

Sections 65588(c) and (d) of the State Government Code state that the Housing Section (or Element) should report on housing activities in the Coastal Zone since January 1, 1982. The required information is presented below:

(1) New Units: A total of 184 new units were constructed in the Coastal Zone after January 1, 1982.

(2) New Low and Moderate Income Units: Eleven multi-family structures, five mobile homes, and six single-family attached units were constructed or installed to serve low or moderate income families since January 1982.

(3) Low and Moderate Income Units Lost: Since 1982, six single-family attached units, one mobile home, and 12 multiple-family units were removed from the Coastal Zone. It is assumed that these dwelling unit types served low and moderate income families.

(4) Low and Moderate Income Units Replaced: Section 65588(d)(4) of the Government Code requires that the Housing Element evaluate the number of low or moderate income dwelling units that have been required for replacement or authorized to be converted or demolished. No program has yet been initiated to assure that low or moderate income units which are removed are replaced by units which will serve the same income groups. However, as stated above, 22 new low and moderate income units have been constructed in the Coastal Zone since 1982, which exceeds the number of such units which have been removed.

3.3.2.12 Public Participation

Section 65588(c) of the State Government Code requires that local Housing Sections (or Elements) describe the effort to achieve public participation of all economic segments of the community in the development of the Housing Section (or Element). Copies of the draft Housing Section were mailed to the following local interest groups for review and comment:

Ventura River Valley Municipal Advisory Council,
El Rio Municipal Advisory Council,
Oak Park Neighborhood Council,
Piru Neighborhood Council,
Las Posas Citizen's Advisory Committee,
Channel Islands Beach Community Services District,
Area Housing Authority,
Building Industry Association,
Citizens to Preserve the Ojai,
Environmental Coalition,
Chamber of Commerce,
League of Women Voters,
Sierra Club,
Areawide Agency on Aging,
Ventura County Taxpayers,
Ventura County Economic Development Association,
Ventura County Association of Governments,
Transportation Committee and
Ventura County School Board Association.

The proposed Housing Section, along with the remainder of the proposed General Plan and the accompanying Environmental Impact Report, were reviewed in public hearings by the County Environmental Report Review Committee (comprised of County staff agencies), the County Planning Commission, and the County Board of Supervisors. In addition to notification by newspaper announcement of the above hearings, written notification were specifically sent to all of the above-identified groups to advise them of hearing dates and to invite public comment.

3.3.2.13 Preservation of Assisted Housing

Section 65583 of the Government Code requires that jurisdictions conduct an analysis and adopt programs for preserving assisted housing developments in their housing elements by July 1, 1992. For jurisdictions which do not have any projects eligible to convert

within the ten-year analysis period (July 1991 - July 2001), the law requires the housing element state that there are no such units in the local jurisdiction.

Currently, the unincorporated area of Ventura County does not have any publicly assisted units which are eligible to convert to non-low-income housing uses due to termination of subsidy contracts, mortgage prepayments, or expiring use restrictions within the ten-year analysis period. The Inventory of Federally Subsidized Low-Income Rental Units at Risk of Conversion, compiled for the California Housing Partnership Corporation, provides information on all HUD assisted projects in the State. According to this document, there are no at-risk units listed for the unincorporated area of Ventura County in the document.

State and local programs (i.e., revenue bond programs, redevelopment programs, CDBG programs, in-lieu fee or inclusionary programs, and density bonus programs) which facilitate or provide subsidies for low-income housing are also required by State law to be included in this analysis of assisted units. Ventura County's unincorporated area does not have any housing developments assisted by any of the above programs which are at risk of being lost to non-low-income housing uses within the ten-year analysis period.

FIGURE 3.3.1

1980-2010 POPULATION FORECAST

AREA	CENSUS 4/1/80	1985	1990	1995	2000	2005	2010
RSA 1	487	540	570	620	650	690	730
NORTH HALF NGA	487	540	570	620	650	690	730
RSA 2	133,105	143,290	149,310	160,410	171,470	179,560	187,890
SANTA PAULA GA	20,889	22,320	24,500	26,000	27,500	29,000	30,500
SANTA PAULA NGA	2,958	3,030	3,050	3,050	3,050	3,050	3,050
OJAI GA	8,411	9,070	9,460	9,550	9,630	9,700	9,760
OJAI NGA	2,298	2,540	2,540	2,620	2,700	2,780	2,860
VENTURA GA	83,209	90,100	93,000	102,000	111,000	116,940	123,150
VENTURA NGA	982	1,120	1,150	1,200	1,250	1,300	1,360
VENTURA RIVER GA	12,849	13,500	14,000	14,360	14,680	15,100	15,500
VENTURA RIVER NGA	1,509	1,610	1,610	1,630	1,660	1,690	1,710
RSA 3	195,250	211,100	239,530	262,910	291,930	316,740	343,100
CAMARILLO GA	45,711	52,690	61,560	68,150	74,300	79,340	84,280
CAMARILLO NGA	3,069	3,680	5,050	5,610	6,140	6,640	7,100
LAS POSAS NGA	1,920	2,030	2,130	2,240	2,340	2,440	2,520
OXNARD GA	121,046	127,700	144,000	159,000	180,000	198,000	217,800
OXNARD NGA	4,997	5,000	5,120	5,100	5,100	5,090	5,070
PORT HUENEME GA	18,507	20,000	21,670	22,810	24,050	25,230	26,330
RSA 4	90,105	106,990	128,590	144,850	159,760	174,000	187,340
MOORPARK GA	8,054	14,260	23,020	29,590	35,740	41,690	47,080
MOORPARK NGA	670	690	750	780	810	830	860
SIMI VALLEY GA	80,294	90,640	103,220	112,650	121,170	129,220	136,930
SIMI VALLEY NGA	1,087	1,400	1,600	1,830	2,040	2,260	2,470
RSA 5	96,877	108,300	124,630	137,350	145,040	150,740	153,550
OAK PARK GA	3,617	4,880	13,130	17,350	16,740	16,230	15,730
OAK PARK NGA	228	300	320	340	350	370	390
THOUSAND OAKS GA	91,962	101,910	109,900	118,300	126,500	132,600	135,800
THOUSAND OAKS NGA	1,070	1,210	1,280	1,360	1,450	1,540	1,630
RSA 6	13,350	14,140	16,520	17,780	18,920	20,050	21,160
FILLMORE GA	9,604	10,300	12,230	13,310	14,260	15,220	16,170
FILLMORE NGA	2,182	2,240	2,240	2,230	2,230	2,230	2,240
PIRU GA	1,368	1,400	1,810	1,980	2,150	2,300	2,440
PIRU NGA	196	200	240	260	280	300	310
COUNTYWIDE TOTAL	529,174	584,360	659,150	723,920	787,770	841,780	893,770

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RSA = Regional Statistical Area
NGA = Nongrowth Area
GA = Growth Area

FIGURE 3.3.2

1980-2010 DWELLING UNIT FORECAST

AREA	CENSUS 4/1/80	1985	1990	1995	2000	2005	2010
RSA 1	323	340	360	380	399	418	437
NORTH HALF NGA	323	340	360	380	399	418	437
RSA 2	52,199	55,491	59,668	65,431	71,357	76,097	80,921
SANTA PAULA GA	7,233	7,645	8,750	9,559	10,377	11,197	12,103
SANTA PAULA NGA	865	882	934	968	1,002	1,036	1,071
OJAI GA	3,316	3,502	3,797	3,912	4,027	4,127	4,227
OJAI NGA	855	929	966	1,023	1,076	1,135	1,187
VENTURA GA	33,811	36,184	38,430	42,857	47,436	50,842	54,249
VENTURA NGA	627	674	698	721	744	767	791
VENTURA RIVER GA	4,916	5,074	5,467	5,742	6,017	6,292	6,568
VENTURA RIVER NGA	576	601	626	649	678	701	725
RSA 3	66,247	71,365	83,939	95,141	108,565	120,255	132,528
CAMARILLO GA	16,804	19,089	23,144	26,314	29,484	31,484	33,484
CAMARILLO NGA	819	960	1,508	1,741	1,973	2,206	2,438
LAS POSAS NGA	580	643	608	666	723	781	838
OXNARD GA	39,815	42,029	48,980	55,986	65,217	73,881	83,130
OXNARD NGA	1,287	1,293	1,398	1,454	1,509	1,565	1,620
PORT HUENEME GA	6,942	7,351	8,301	8,980	9,659	10,338	11,018
RSA 4	26,724	31,616	40,109	46,801	53,492	60,184	66,877
MOORPARK GA	2,476	4,361	7,379	9,830	12,281	14,732	17,184
MOORPARK NGA	267	269	304	322	340	358	377
SIMI VALLEY GA	23,534	26,425	31,761	35,875	39,988	44,102	48,215
SIMI VALLEY NGA	447	561	665	774	883	992	1,101
RSA 5	33,663	37,216	44,303	50,117	54,424	57,981	60,539
OAK PARK GA	1,078	1,447	4,091	5,598	5,598	5,598	5,598
OAK PARK NGA	76	95	110	120	130	140	150
THOUSAND OAKS GA	31,902	35,019	39,400	43,650	47,900	51,400	53,900
THOUSAND OAKS NGA	607	655	702	749	796	843	891
RSA 6	4,228	4,321	5,433	6,035	6,637	7,240	7,841
FILLMORE GA	3,055	3,129	4,048	4,544	5,040	5,536	6,032
FILLMORE NGA	729	740	775	797	820	843	866
PIRU GA	380	388	528	603	677	751	825
PIRU NGA	64	64	82	91	100	110	118
COUNTYWIDE TOTAL	183,384	200,342	233,812	263,905	294,874	322,175	349,143

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RSA = Regional Statistical Area
NGA = Nongrowth Area
GA = Growth Area

FIGURE 3.3.3

1980-2010 POPULATION PER DWELLING UNIT RATIO FORECAST

AREA	CENSUS 4/1/80	1985	1990	1995	2000	2005	2010
RSA 1	1.51	1.59	1.58	1.63	1.63	1.65	1.67
NORTH HALF NGA	1.51	1.59	1.58	1.63	1.63	1.65	1.67
RSA 2	2.55	2.58	2.50	2.45	2.40	2.36	2.32
SANTA PAULA GA	2.89	2.92	2.80	2.72	2.65	2.59	2.52
SANTA PAULA NGA	3.42	3.44	3.27	3.15	3.04	2.94	2.85
OJAI GA	2.54	2.59	2.49	2.44	2.39	2.35	2.31
OJAI NGA	2.69	2.73	2.63	2.56	2.51	2.45	2.41
VENTURA GA	2.46	2.49	2.42	2.38	2.34	2.30	2.27
VENTURA NGA	1.57	1.66	1.65	1.66	1.68	1.69	1.72
VENTURA RIVER GA	2.61	2.66	2.56	2.50	2.44	2.40	2.36
VENTURA RIVER NGA	2.62	2.68	2.57	2.51	2.45	2.41	2.36
RSA 3	2.95	2.96	2.85	2.76	2.69	2.63	2.59
CAMARILLO GA	2.72	2.76	2.66	2.59	2.52	2.52	2.52
CAMARILLO NGA	3.52	3.52	3.35	3.22	3.11	3.01	2.91
LAS POSAS NGA	3.69	3.68	3.50	3.36	3.24	3.12	3.01
OXNARD GA	3.04	3.04	2.94	2.84	2.76	2.68	2.62
OXNARD NGA	3.88	3.87	3.66	3.51	3.38	3.25	3.13
PORT HUENEME GA	2.67	2.72	2.61	2.54	2.49	2.44	2.39
RSA 4	3.37	3.38	3.21	3.10	2.99	2.89	2.80
MOORPARK GA	3.25	3.27	3.12	3.01	2.91	2.83	2.74
MOORPARK NGA	2.51	2.57	2.47	2.42	2.38	2.32	2.28
SIMI VALLEY GA	3.41	3.43	3.25	3.14	3.03	2.93	2.84
SIMI VALLEY NGA	2.43	2.50	2.41	2.36	2.31	2.28	2.24
RSA 5	2.88	2.91	2.81	2.74	2.67	2.60	2.54
OAK PARK GA	3.36	3.37	3.21	3.10	2.99	2.90	2.81
OAK PARK NGA	3.00	3.16	2.90	2.83	2.69	2.64	2.60
THOUSAND OAKS GA	2.88	2.91	2.79	2.71	2.64	2.58	2.52
THOUSAND OAKS NGA	1.76	1.85	1.82	1.82	1.82	1.83	1.83
RSA 6	3.16	3.27	3.04	2.95	2.85	2.77	2.70
FILLMORE GA	3.14	3.29	3.02	2.93	2.83	2.75	2.68
FILLMORE NGA	2.99	3.02	2.89	2.80	2.72	2.65	2.59
PIRU GA	3.60	3.61	3.42	3.28	3.18	3.06	2.96
PIRU NGA	3.06	3.13	2.93	2.86	2.80	2.73	2.63
COUNTYWIDE TOTAL	2.89	2.92	2.82	2.74	2.67	2.61	2.56

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RSA = Regional Statistical Area
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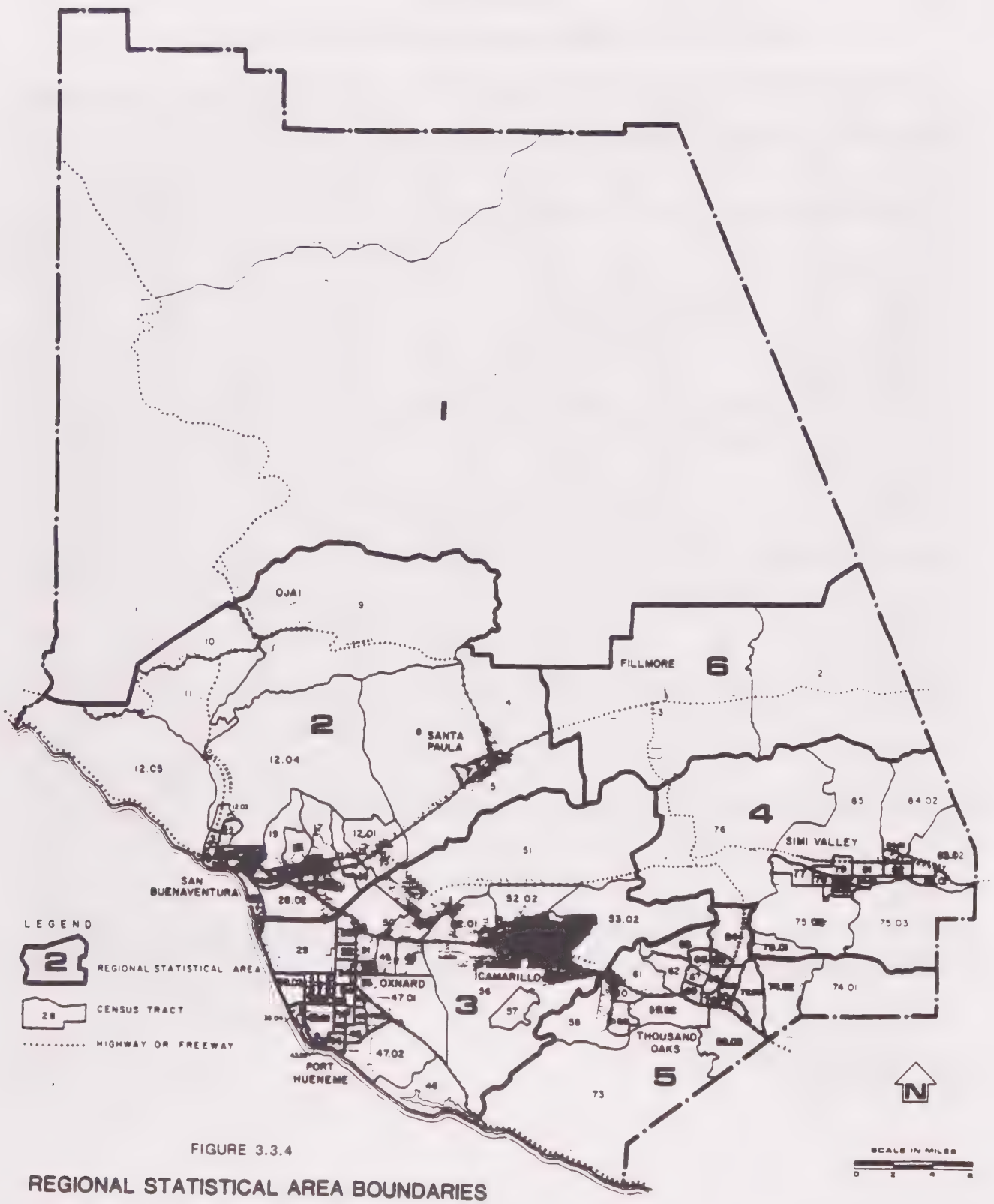


FIGURE 3.3.4

REGIONAL STATISTICAL AREA BOUNDARIES

SOURCE: SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

FIGURE 3.3.5

COMPARISON OF YEAR 2000 POPULATION FORECASTS

AREA	TREND	1980 WATER QUALITY PLAN	1982 WATER QUALITY PLAN	1985 ADOPTED FORECAST	LOW RANGE HOLDING CAPACITY	HIGH RANGE HOLDING CAPACITY
RSA 1	644	650	725	650	509	8,150
NORTH HALF NGA	644	650	725	650	509	8,150
RSA 2	158,510	168,925	173,931	171,470	218,153	281,345
SANTA PAULA GA	23,765	24,758	26,131	27,500	16,695	33,265
SANTA PAULA NGA	2,848	2,952	3,159	3,050	675	10,828
OJAI GA	9,797	8,375	11,389	9,630	7,638	12,375
OJAI NGA	2,929	3,651	2,497	2,700	2,081	9,518
VENTURA GA	102,499	110,969	112,781	111,000	175,894	184,190
VENTURA NGA	1,386	2,611	2,365	1,250	3,475	7,373
VENTURA RIVER GA	13,618	13,303	13,303	14,680	10,112	18,619
VENTURA RIVER NGA	1,668	2,306	2,306	1,660	1,583	5,177
RSA 3	235,288	307,535	310,371	291,930	214,388	406,794
CAMARILLO GA	66,591	78,050	78,050	74,300	68,385	86,169
CAMARILLO NGA	3,269	11,901	9,851	6,140	1,966	6,593
LAS POSAS NGA	3,802	1,444	1,444	2,340	1,989	8,745
OXNARD GA	135,618	184,590	191,024	180,000	121,211	271,264
OXNARD NGA	4,435	4,650	5,102	5,100	4,316	6,598
PORT HUENEME GA	21,573	26,900	24,900	24,050	16,521	27,425
RSA 4	141,287	153,440	146,570	159,760	149,500	244,459
MOORPARK GA	30,302	29,177	21,677	35,740	26,400	43,766
MOORPARK NGA	652	933	1,363	810	455	2,385
SIMI VALLEY GA	108,192	121,165	121,165	121,170	122,024	192,660
SIMI VALLEY NGA	2,141	2,165	2,365	2,040	621	5,648
RSA 5	128,637	164,455	161,288	145,040	121,765	283,635
OAK PARK GA	7,870	17,000	14,121	16,740	15,712	23,259
OAK PARK NGA	426	250	201	350	1,783	5,490
THOUSAND OAKS GA	118,869	144,892	144,592	126,500	103,913	251,312
THOUSAND OAKS NGA	1,472	2,313	2,374	1,450	857	6,574
RSA 6	13,127	16,300	18,420	18,920	11,200	41,328
FILLMORE GA	9,529	12,950	14,264	14,260	8,530	19,349
FILLMORE NGA	2,108	2,250	2,442	2,230	549	8,813
PIRU GA	1,312	760	1,435	2,150	1,491	2,725
PIRU NGA	178	340	279	280	650	10,441
COUNTYWIDE TOTAL	677,493	811,305	811,305	787,770	716,035	1,268,711

Source: As stated above each column. Holding Capacity Date are from Figure 3.2.5.

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RSA = Regional Statistical Area
NGA = Nongrowth Area
GA = Growth Area

FIGURE 3.3.6

COMPARISON OF YEAR 2000 POPULATION FORECASTS

AREA	TREND	1980 WATER QUALITY PLAN	1982 WATER QUALITY PLAN	1985 ADOPTED FORECAST	LOW RANGE HOLDING CAPACITY	HIGH RANGE HOLDING CAPACITY
RSA 1	395	490	483	399	312	5,000
NORTH HALF NGA	395	490	483	399	312	5,000
RSA 2	66,061	64,851	71,454	71,357	88,000	112,816
SANTA PAULA GA	8,968	8,746	9,787	10,377	6,300	12,553
SANTA PAULA NGA	937	934	970	1,002	222	3,562
OJAI GA	4,099	3,093	4,910	4,027	3,196	5,178
OJAI NGA	1,167	1,352	1,067	1,076	829	3,792
VENTURA GA	43,803	43,907	47,997	47,436	70,925	74,270
VENTURA NGA	825	998	902	744	2,119	4,496
VENTURA RIVER GA	5,581	4,967	4,967	6,017	3,816	7,026
VENTURA RIVER NGA	681	854	854	678	593	1,939
RSA 3	87,766	109,982	113,601	108,565	80,212	150,263
CAMARILLO GA	26,425	29,478	31,135	29,484	27,137	34,194
CAMARILLO NGA	1,051	3,182	2,997	1,973	632	2,120
LAS POSAS NGA	1,177	560	560	723	614	2,699
OXNARD GA	49,137	66,199	67,064	65,217	43,917	98,284
OXNARD NGA	1,312	1,656	1,845	1,509	1,277	1,952
PORT HUENEME GA	8,664	8,907	10,000	9,659	6,635	11,014
RSA 4	47,322	49,467	51,423	53,492	49,804	82,071
MOORPARK GA	10,413	9,743	7,613	12,281	9,072	15,040
MOORPARK NGA	275	289	440	340	191	1,002
SIMI VALLEY GA	35,707	38,711	42,473	39,988	40,272	63,584
SIMI VALLEY NGA	927	724	897	883	269	2,445
RSA 5	48,623	56,350	57,369	54,424	45,750	108,626
OAK PARK GA	2,632	6,660	4,755	5,598	5,255	7,779
OAK PARK NGA	156	70	67	130	663	2,041
THOUSAND OAKS GA	45,026	48,566	51,639	47,900	39,361	95,194
THOUSAND OAKS NGA	809	1,054	908	796	471	3,612
RSA 6	4,620	5,635	6,153	6,637	3,917	14,663
FILLMORE GA	3,367	4,530	4,771	5,040	3,014	6,837
FILLMORE NGA	775	750	814	820	202	3,240
PIRU GA	414	235	475	677	469	857
PIRU NGA	64	120	93	100	232	3,729
COUNTYWIDE TOTAL	254,787	283,322	300,483	294,874	267,995	473,439

Source: As stated above each column. Holding Capacity Data are from Figure 3.2.5.

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RSA = Regional Statistical Area
NGA = Nongrowth Area
GA = Growth Area

FIGURE 3.3.7

1988 EXISTING HOUSING NEED BY JURISDICTION

JURISDICTION	1988 HOUSEHOLDS[1]	LOW-INCOME HOUSEHOLDS OVERPAYING FOR SHELTER[2]	PERCENTAGE OF LOW-INCOME HOUSEHOLDS[3]
CAMARILLO	17,318	1,807	10.4%
FILLMORE	3,341	500	14.9%
MOORPARK	6,688	960	14.3%
OJAI	2,900	572	19.7%
OXNARD	38,134	7,649	20.0%
PORT HUENEME	6,754	1,116	16.5%
SAN BUENAVENTURA	35,093	6,522	18.5%
SANTA PAULA	7,717	1,375	17.8%
SIMI VALLEY	29,209	3,246	11.1%
THOUSAND OAKS	34,408	4,021	11.6%
UNINCORPORATED	27,818	3,058	10.9%
COUNTYWIDE TOTAL	209,380	30,826	14.7%

SOURCE: Southern California Association of Governments, 1988 Regional Housing Needs Assessment

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[1]1988 State Department of Finance (DOF) estimate.
[2]1980 Census.
[3]Low-income households (column 2) divided by 1988 Households (column 1).

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FIGURE 3.3.8

1989-1994 FUTURE HOUSING NEEDS BY JURISDICTION

JURISDICTION	HOUSEHOLD GROWTH[1]	VACANCY ADJUSTMENT[2]	DEMOLITION ADJUSTMENT[3]	FUTURE HOUSING NEED (1989-1994)[4]
CAMARILLO	2,598	293	32	2,923
FILLMORE	269	44	25	338
MOORPARK	2,750	(-12)	5	2,743
OJAI	112	21	8	141
OXNARD	3,341	965	48	4,354
PORT HUENEME	540	99	5	644
SAN BUENAVENTURA	3,507	566	43	4,116
SANTA PAULA	487	96	37	620
SIMI VALLEY	4,132	610	38	4,780
THOUSAND OAKS	5,038	512	42	5,592
UNINCORPORATED	2,576	214	88	2,878
COUNTYWIDE TOTAL	25,350	3,408	371	29,129

SOURCE: Southern California Association of Governments, 1988 Regional Housing Needs Assessment

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[1]Forecasted 1994 households (GMP data) minus total 1988 households (DOF data) multiplied by 0.769.
[2]Existing vacancy need plus future vacancy need.
[3]Actual number of demolitions (1984-1986) multiplied by 1.66.
[4]Household growth plus vacancy adjustment plus demolition adjustment.

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FIGURE 3.3.9

FUTURE HOUSING NEEDS BY INCOME CATEGORY

(July 1989 to July 1994)

JURISDICTION	VERY-LOW INCOME	LOW INCOME	MODERATE INCOME	HIGH INCOME	TOTAL
CAMARILLO	449	544	616	1,314	2,923
FILLMORE	45	71	91	131	338
MOORPARK	444	515	706	1,078	2,743
OJAI	17	28	41	55	141
OXNARD	745	974	1,101	1,534	4,354
PORT HUENEME	102	122	188	232	644
SAN BUENAVENTURA	698	1,044	892	1,482	4,116
SANTA PAULA	83	138	187	212	620
SIMI VALLEY	612	693	1,069	2,406	4,780
THOUSAND OAKS	791	882	1,086	2,833	5,592
UNINCORPORATED	485	664	570	1,159	2,878
COUNTYWIDE TOTAL	4,471	5,675	6,547	12,436	29,129

SOURCE: Southern California Association of Governments, 1988 Regional Housing Needs Assessment

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FIGURE 3.3.10

ADJUSTED FUTURE HOUSING NEEDS
VENTURA COUNTY

JURISDICTION	"GAP" NEED 1/88 - 7/89[1]	FUTURE NEED 7/89 - 7/94[2]	ADJUSTED FUTURE NEED 1/88 - 7/94[3]
CAMARILLO	811	2,923	3,734
FILLMORE	91	338	429
MOORPARK	847	2,743	3,590
OJAI	37	141	178
OXNARD	1,048	4,354	5,402
PORT HUENEME	169	644	813
SAN BUENAVENTURA	1,098	4,116	5,214
SANTA PAULA	162	620	782
SIMI VALLEY	1,282	4,780	6,062
THOUSAND OAKS	1,563	5,592	7,155
UNINCORPORATED	819	2,878	3,697
COUNTYWIDE TOTAL	**7,927**	**29,129**	**37,056**

SOURCE: Southern California Association of Governments, 1988 Regional Housing Needs Assessment — Ventura County General Plan Land Use Appendix

[1]Forecasted future housing need during "gap" period (1/88 - 7/89).
[2]Forecasted five-year future housing need (7/89 - 7/94).
[3]Future housing need adjusted by combining "gap" period need (1/88 - 7/89) and five-year future housing need (7/89 - 7/94).

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FIGURE 3.3.11

ADJUSTED FUTURE HOUSING NEEDS BY INCOME CATEGORY (January 1988 - July 1994)

JURISDICTION	VERY LOW INCOME	LOW INCOME	MODERATE INCOME	HIGH INCOME	TOTAL
CAMARILLO	573	695	787	1,679	3,734
FILLMORE	57	90	116	166	429
MOORPARK	581	674	924	1,411	3,590
OJAI	22	35	52	69	178
OXNARD	924	1,209	1,366	1,903	5,402
PORT HUENEME	129	154	237	293	813
SAN BUENAVENTURA	885	1,322	1,130	1,877	5,214
SANTA PAULA	105	174	236	267	782
SIMI VALLEY	776	879	1,356	3,051	6,062
THOUSAND OAKS	1,011	1,129	1,389	3,626	7,155
UNINCORPORATED	623	853	732	1,489	3,697
COUNTYWIDE TOTAL	5,686	7,214	8,325	15,831	37,056

SOURCE: Southern California Association of Governments, 1988 Regional Housing Needs Assessment

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FIGURE 3.3.12

HOUSEHOLD INCOME DISTRIBUTION BY JURISDICTION

1980 INCOME DISTRIBUTION[1]	CAM	FILL	MPK	OJAI	OXN	P. MUE	S. PAU	SIMI	T.O.	VENT	UNINC	COUNTY-WIDE
VERY LOW	14.9%	19.7%	16.0%	17.5%	21.0%	24.3%	19.7%	11.5%	13.3%	17.8%	16.9%	17.2%
LOW	17.0%	31.8%	17.3%	30.7%	26.9%	27.8%	33.9%	11.5%	13.2%	27.1%	22.5%	22.0%
MODERATE	21.8%	21.7%	28.1%	24.5%	23.8%	24.1%	24.8%	23.5%	19.6%	21.9%	20.7%	22.0%
UPPER	46.2%	26.9%	38.7%	27.3%	28.3%	23.9%	21.5%	53.5%	53.9%	33.2%	40.0%	38.8%
NUMBER OF HOUSEHOLDS BY INCOME CATEGORY (1987)[2]	**CAM**	**FILL**	**MPK**	**OJAI**	**OXN**	**P. MUE**	**S. PAU**	**SIMI**	**T.O.**	**VENT**	**UNINC**	**COUNTY-WIDE**
VERY LOW	2,509	654	825	505	7,850	1,590	1,498	3,217	4,449	6,151	4,585	33,833
LOW	2,862	1,056	892	885	10,056	1,819	2,578	3,217	4,415	9,365	6,105	43,250
MODERATE	3,671	721	1,449	707	8,897	1,577	1,886	6,574	6,556	7,568	5,617	45,223
UPPER	7,779	893	1,996	787	10,579	1,564	1,635	14,967	18,028	11,473	10,853	80,554
TOTAL	16,838	3,321	5,158	2,884	37,382	6,542	7,605	27,976	33,448	34,556	27,133	202,843

Source: [1]1980 Census
[2]1987 Population Estimates (State Department of Finance) times 1980 Income Distribution

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Definitions:

VERY LOW - Annual income of 50% or less than the median household income for the County
LOW - Annual income of 80% or less than the median household income for the County
MODERATE - Annual income of between 80% and 120% of the median household income for the County
UPPER - Annual income of over 120% of the median household income for the County

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FIGURE 3.3.13

OVERCROWDED DWELLING UNITS (1980)

JURISDICTION	TOTAL	RENTER-OCCUPIED	OWNER-OCCUPIED	% OVERCROWDED
CAMARILLO	337	184	153	2.4%
FILLMORE	455	265	190	15.0%
MOORPARK*	256	146	110	9.3%
OJAI	79	46	33	3.0%
OXNARD	5,614	3,463	2,151	16.0%
PORT HUENEME	575	423	152	8.5%
SANTA PAULA	981	743	238	13.7%
SIMI VALLEY	812	282	530	3.6%
THOUSAND OAKS	576	310	266	2.1%
VENTURA	957	650	307	3.1%
UNINCORPORATED	2,289	1,471	818	6.8%
COUNTYWIDE TOTAL	12,931	7,983	4,948	7.1%

Source: 1980 Census

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*Figures approximate (Moorpark not incorporated until 1983)

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FIGURE 3.3.14

UNITS LACKING COMPLETE PLUMBING FOR EXCLUSIVE USE OF OCCUPANTS (1980)

JURISDICTION	TOTAL	OCCUPIED	RENTER OCCUPIED	OWNER OCCUPIED	% LACKING PLUMBING
CAMARILLO	29	25	19	6	0.2%
FILLMORE	24	22	16	6	0.8%
MOORPARK*	23	21	17	4	0.8%
OJAI	13	13	8	5	0.5%
OXNARD	464	439	344	95	1.3%
PORT HUENEME	38	37	35	2	0.6%
SANTA PAULA	60	53	40	13	0.3%
SIMI VALLEY	49	48	26	22	0.2%
THOUSAND OAKS	73	69	51	18	0.3%
VENTURA	499	456	281	175	1.6%
UNINCORPORATED	580	397	292	105	1.7%
COUNTYWIDE TOTAL	1,852	1,580	1,129	451	1.0%

Source: 1980 Census

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*Figures approximate (Moorpark not incorporated until 1983)

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FIGURE 3.3.15

YEAR STRUCTURE BUILT

JURISDICTION	BEFORE 1940	1940-49	1950-59	1960-69	1970-80	TOTAL
CAMARILLO	106	209	1,023	4,031	8,859	14,228
FILLMORE*	747	388	517	486	903	3,041
MOORPARK*	164	60	560	356	1,278	2,418
OJAI*	379	366	634	535	1,019	2,933
OXNARD	976	1,978	6,736	11,252	14,000	34,942
PORT HUENEME	108	432	1,539	1,884	2,772	6,735
SANTA PAULA	1,561	769	1,205	1,913	1,693	7,141
SIMI VALLEY	232	144	1,151	12,345	8,761	22,633
THOUSAND OAKS	168	175	1,268	8,182	17,676	27,469
VENTURA	3,202	2,177	5,479	10,328	9,472	30,598
UNINCORPORATED	3,656	3,702	6,624	10,113	6,497	30,592
COUNTYWIDE TOTAL	11,299	10,340	26,736	61,425	72,930	182,730

Source: 1980 Census

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*Figures approximate; derived from Census Tract data.

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FIGURE 3.3.16

VACANT, UNINCORPORATED AREAS SUITABLE FOR LOW AND MODERATE INCOME HOUSING

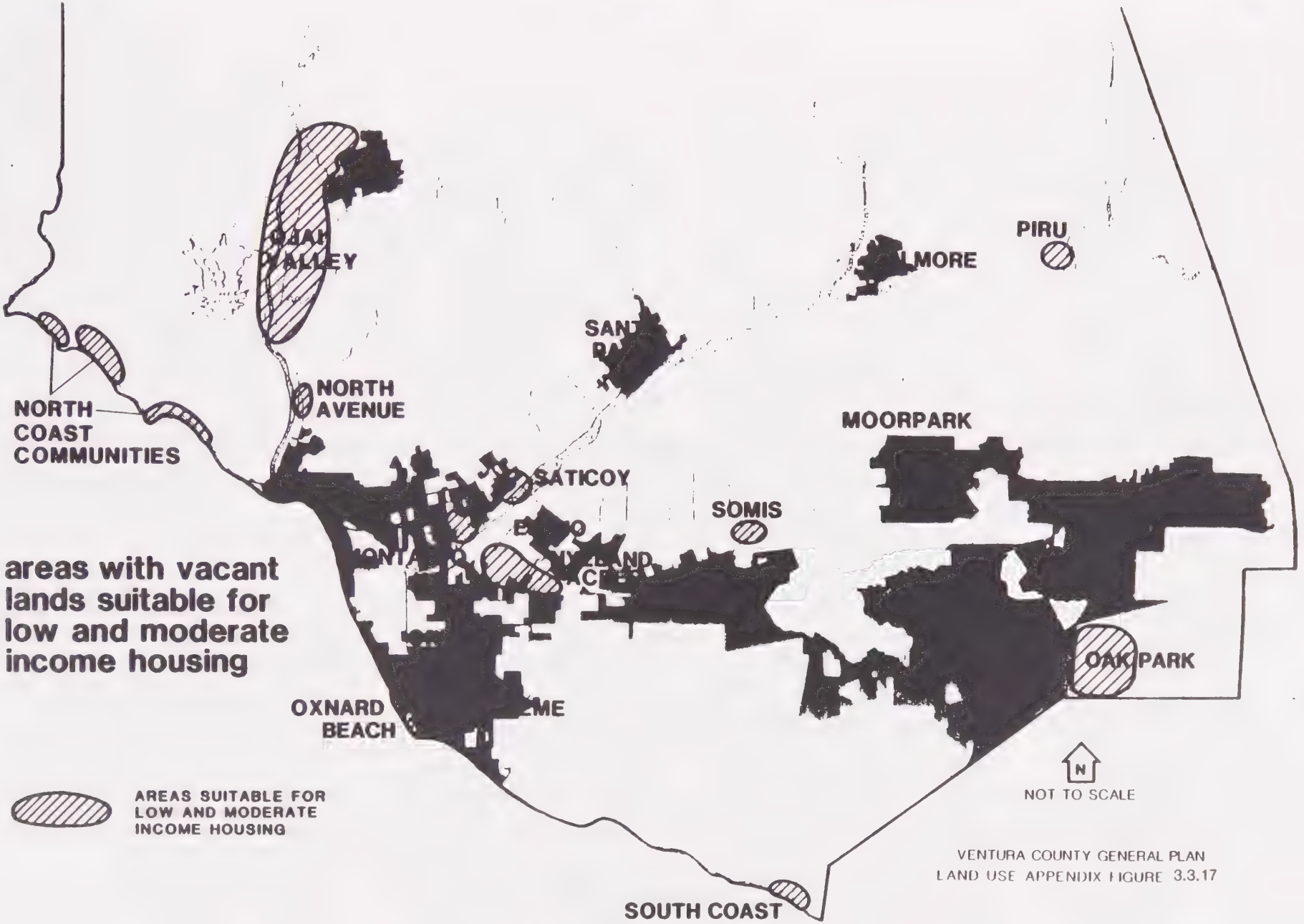
AREA	VACANT ACREAGE[1]	DUs POSSIBLE[2]
MONTALVO	1.05 ACRES	12 UNITS
SATICOY	0.09	3
VENTURA AVENUE	22.00	154
EL RIO & NYELAND ACRES	18.75	81
PIRU	105.56	528
OAK PARK	473.00	5,478
OJAI VALLEY	59.60	230
SOMIS	0.80	7
OXNARD BEACH AREA	20.60	456
NORTH COAST	29.70	839
SOUTH COAST	6.60	60
COUNTYWIDE TOTAL	737.80 ACRES	7,848 UNITS

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[1]Includes only those vacant lands designated for densities of one dwelling unit per 10,000 square feet or greater.
[2]Based on Area Plan land use designation (when present zoning is less restrictive than the Area Plan designation), or zoning where no Area Plan exists.

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VENTURA COUNTY GENERAL PLAN
LAND USE APPENDIX FIGURE 3.3.17

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FIGURE 3.3.18

MAJOR COST COMPONENTS
SINGLE FAMILY HOUSING

COST COMPONENT	1970		1976		1978		1980		1970-1980 Change	
	Cost	% of Total Cost	Cost	% of Total Cost	Cost	% of Total Cost	Cost	% of Total Cost	Cost Change	% Change
Improved Land (Raw Land and Improvements)	$ 6,600	21.0%	$14,800	25.0%	$20,100	26.8%	$26,700	27.8%	+$20,100	+305.0%
Material and Labor	$17,580	56.0%	$29,000	49.0%	$34,500	46.0%	$40,770	42.5%	+$23,190	+132.0%
Construction Financing	$ 2,040	6.5%	$ 5,000	8.5%	$ 7,200	9.6%	$11,530	12.0%	+$ 9,490	+465.0%
Overhead and Profit*	$ 3,770	12.0%	$ 7,400	12.5%	$ 9,300	12.4%	$12,200	12.7%	+$ 8,430	+224.0%
OTHER*	$ 1,410	4.5%	$ 2,900	4.9%	$ 3,800	5.1%	$ 4,800	5.0%	+$ 3,390	+240.0%
TOTAL	$31,400	100.0%	$59,100	100.0%	$74,900	100.0%	$96,000	100.0%	+$64,600	+206.0%

Source: Data obtained from construction Industry Research Board, 1983

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*Overhead, profit and other costs are residual estimates remaining after determination of construction, land financing and total costs.

NOTE: Figures are State averages.

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3.4 EMPLOYMENT AND COMMERCE/INDUSTRY

Figure 3.4.1 presents a comparison of year 2010 employment forecasts for Ventura County. The forecasts were developed by the Southern California Association of Governments (SCAG), the State Department of Transportation (Caltrans), and County Planning Division staff. The SCAG forecast was originally prepared in 1982 and was modified in 1984. The Caltrans and County forecasts were prepared in 1985 and 1986 to be used (along with the SCAG forecast) in a Ventura County Area Transportation Study (VCATS) prepared jointly by SCAG, Caltrans, and the County Public Works Agency.

3.4.1 REGIONAL STATISTICAL AREA FORECASTS

For comparison purposes, the forecast is presented by Regional Statistical Area (RSA) as well as by Growth and Nongrowth Area. No SCAG forecast was available at the Growth/Nongrowth Area level.

Generally, the SCAG and Caltrans forecasts are similar at the RSA and Countywide level. In RSA's 1, 2, and 6, the SCAG and Caltrans forecasts are nearly identical; County staff elected to use the SCAG/Caltrans figures in these RSA's as controls.

Figure 3.4.2 compares the growth rates of the Caltrans, SCAG, and County forecasts. In RSA 3 (Oxnard-Port Hueneme-Camarillo), the SCAG forecast show an average 1984-2010 growth rate of 84%, which is closer to the Countywide employment growth rate (89%) than the Caltrans forecast (77%). Oxnard and Camarillo are expected to parallel Countywide growth trends. For this reason, County staff elected to use the SCAG forecast in this RSA for the VCATS study.

In RSA 4 (Simi Valley-Moorpark), both SCAG and Caltrans show a significantly higher-than-average growth rate (114% and 143%, respectively) than the County as a whole. County staff elected to use the higher Caltrans employment forecast in this RSA because Moorpark and Simi Valley are currently far below the average County jobs/housing ratio (0.70 for RSA 4 in 1984 vs. 1.02 Countywide), and the ratio for this RSA is expected to steadily merge with the Countywide ratio.

In RSA 5 (Thousand Oaks), SCAG and Caltrans again show a much higher-than average employment growth rate (129% and 111%, respectively). In addition, both SCAG and Caltrans show a higher year 2010 population forecast for this RSA than was officially adopted by the Board of Supervisors:

SCAG	194,000
Caltrans	160,737
County	153,550

County staff applied the Caltrans employment/population ratios (0.40) to the County population forecast for this RSA to obtain a revised employment forecast (61,419).

3.4.2 GROWTH AREA FORECASTS

Within each RSA, Caltrans prepared employment forecasts at the Analysis Zone level, based on field surveys and a review of local general plans. For the VCATS study, County staff adjusted the Caltrans AZ-level forecasts

to match the County-preferred RSA totals. However, employment for Nongrowth Areas was not allowed to exceed a 50% increase between 1984 and 2010 (see Figure 3.4.2). In areas where this occurred, the "excess" employment was shifted to the corresponding Growth Area, so that the County totals for each RSA would not be affected.

In addition, the rate of employment growth for the Ojai Growth Area was reduced to match the rate of population growth for this Growth Area (8.6%). This "excess" employment was shifted to the Ventura Growth Area so the County-preferred RSA total would remain the same.

3.4.3 METHODOLOGY FOR INTERPOLATION

To obtain employment forecast figures between 1984 and 2010, it was assumed that employment would change proportionately with population between 1985 and 2010.

Because the 1984 and 2010 employment/population ratio had already been derived for each Growth and Nongrowth Area, this ratio was interpolated for the intervening years. The employment forecast for the intervening years was then obtained by multiplying the employment/population ratios by the population forecast (see Figure 3.4.3).

3.4.4 RETAIL EMPLOYMENT

In addition to its total employment forecasts, Caltrans prepared retail employment forecasts at the Analysis Zone level. Based on a comparison of the Caltrans forecast and adopted general plans, an approximate density of 12.8 retail employees per acre was derived. County staff utilized this approximate ratio and the general plan "commercial" designations to obtain year 2010 retail employment figures for each Analysis Zone.

Retail employment growth was controlled within each Analysis Zone so it would not exceed total employment growth between 1984 and 2010. In addition, year 2010 retail employment was not allowed to drop lower than 1984 levels.

To interpolate retail employment for the intervening years, County staff first interpolated 1984 and 2010 retail employment/total employment ratios, then applied these ratios to the total employment forecast (Figure 3.4.3). The resultant retail employment forecast is presented in Figure 3.4.4.

3.4.5 BUILDING INTENSITY/EMPLOYMENT DENSITY

The building intensity and employment density capacity tables which were developed for each Growth and Nongrowth Area in Section 3.2.1 above enable a comparison to be made between the employment forecasts and adopted general plans (refer to Figures 3.2.3 and 3.2.6).

Figure 3.4.5 compares the total and retail employment holding capacity figures with the year 2000 forecast prepared by County staff. The year 2000 was selected for comparison (rather than the year 2010) because it is the target year of most local general plans.

Figure 3.4.6 compares the employment/population ratios for each Growth and Nongrowth Area in 1984, in the year 2000 (based on employment and population forecasts), and in the "ultimate" buildout year (based on the holding capacity tables).

According to the Southern California Association of Governments, "balanced" subregions are defined as those subregions having an employment to population ratio between 0.38 and 0.55. Subregions having a higher ratio are defined as "jobs-rich/housing deficient", and subregions having a lower ratio are "job-poor/housing rich."

Overall, Ventura County was slightly jobs-poor in 1984, but is expected to be balanced by the year 2000 and in the ultimate buildout year. The Port Hueneme and Ventura GAs are expected to be job-rich by the year 2000; the Thousand Oaks GA is expected to be balanced; and the remainder of the Growth Areas are expected to be job-poor/housing rich.

Figure 3.4.7 compares the employment/housing ratios for the same three time periods (1984, 2000, and "ultimate buildout year"). The "balanced" ratio under this table is 1.00, or one job per dwelling unit.

According to this table, the County was already balanced in 1984, and is expected to remain so in the year 2000. The holding capacity figures indicate that Simi Valley has designated a very high proportion of its lands for commercial and industrial uses (compared to residential), whereas Thousand Oaks appears to have designated a very low proportion.

The issue of employment/housing balance is significant in that it can affect the number of home-based work trips in an area. In a balanced subregion, work trips within the subregion are predominant, while unbalanced subregions generate work trips to or from outlying areas.

The relative number of jobs and housing units can also affect housing availability in an area. A jobs-rich/housing poor area may constitute a tight housing market, where vacancy rates are low and housing prices are high. Section 3.3.2 above presents an assessment of housing needs within the County, and addresses the issue of "ideal" vacancy rates for each jurisdiction. Section 3.3.2 also identifies the number of vacant units which would be needed to assure a "normal" housing market, based on the population and employment forecasts contained in Section 3.2.2.

As stated in Section 3.2.1 above, the implications of the alternate forecast scenarios were considered by the Countywide Planning Program Advisory Committee (CPP) in 1984 and 1985 when the Countywide population forecast was being prepared. One of the specific considerations which was weighed was the effect of the forecast on the availability of housing, which in turn would encourage or discourage commercial and industrial development, depending on the forecast which was adopted. CPP ultimately recommended the mid-range forecast, which represented a moderate growth rate policy, to ensure that the existing balance between jobs and housing would not be significantly altered.

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FIGURE 3.4.1

TOTAL EMPLOYMENT

AREAS	1984 COUNTY	2010 CALTRANS	2010 SCAG	2010 COUNTY	BASELINE NEW 2010 SCAG
RSA 1	100	200	200	200	187
NORTH HALF NGA	100	200		200	
RSA 2	56,696	102,627	102,600	102,623	96,069
SANTA PAULA GA	6,668	8,738		9,016	
SANTA PAULA NGA	454	960		681	
OJAI GA	3,240	5,022		3,513	
OJAI NGA	147	241		221	
VENTURA GA	47,431	84,459		86,328	
VENTURA NGA	449	1,018		674	
VENTURA RIVER GA	1,246	2,052		2,098	
VENTURA RIVER NGA	61	137		92	
RSA 3	86,197	152,681	158,800	158,800	148,692
CAMARILLO GA	16,412	26,878		28,016	
CAMARILLO NGA	1,044	1,538		1,566	
LAS POSAS NGA	759	1,121		1,139	
OXNARD GA	47,400	97,538		101,447	
OXNARD NGA	8,082	11,613		12,078	
PORT HUENEME GA	12,500	13,993		14,554	
RSA 4	20,998	51,873	45,000	50,974	42,136
MOORPARK GA	2,631	5,939		5,939	
MOORPARK NGA	0	1,000		1,000	
SIMI VALLEY GA	15,723	39,787		40,069	
SIMI VALLEY NGA	2,644	5,147		3,966	
RSA 5	30,101	63,506	68,800	61,419	64,421
OAK PARK GA	42	1,056		1,020	
OAK PARK NGA	0	0		0	
THOUSAND OAKS GA	29,968	61,991		60,267	
THOUSAND OAKS NGA	91	459		132	
RSA 6	3,100	4,805	4,800	4,805	4,494
FILLMORE GA	2,304	3,393		3,602	
FILLMORE NGA	433	859		650	
PIRU GA	200	308		308	
PIRU NGA	163	245		245	
COUNTYWIDE TOTAL	200,192	375,692	380,200	378,821	355,999

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Land Use Appendix

RSA = Regional Statistical Area
NGA = Nongrowth Area
GA = Growth Area

FIGURE 3.4.2

COMPARISON OF 1984 - 2010 EMPLOYMENT FORECAST GROWTH RATES

AREAS	CALTRANS	SCAG	COUNTY
RSA 1	100%	100%	100%
NORTH HALF NGA	100%	100%	100%
RSA 2	81%	81%	81%
SANTA PAULA GA	31%		35%
SANTA PAULA NGA	111%		50%
OJAI GA	55%		8%
OJAI NGA	64%		50%
VENTURA GA	78%		82%
VENTURA NGA	127%		50%
VENTURA RIVER GA	65%		68%
VENTURA RIVER NGA	125%		51%
RSA 3	77%	84%	84%
CAMARILLO GA	64%		71%
CAMARILLO NGA	47%		50%
LAS POSAS NGA	48%		50%
OXNARD GA	106%		114%
OXNARD NGA	44%		49%
PORT HUENEME GA	12%		16%
RSA 4	147%	114%	143%
MOORPARK GA	126%		126%
MOORPARK NGA	--		--
SIMI VALLEY GA	153%		155%
SIMI VALLEY NGA	95%		50%
RSA 5	111%	129%	104%
OAK PARK GA	2,414%		2,329%
OAK PARK NGA	0%		0%
THOUSAND OAKS GA	107%		101%
THOUSAND OAKS NGA	404%		45%
RSA 6	55%	55%	55%
FILLMORE GA	47%		56%
FILLMORE NGA	98%		50%
PIRU GA	54%		54%
PIRU NGA	50%		50%
COUNTYWIDE TOTAL	**88%**	**90%**	**89%**

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Land Use Appendix

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GA = Growth Area

FIGURE 3.4.3

1980-2010 TOTAL EMPLOYMENT FORECAST

AREAS	CENSUS 4/1/80	1985	1990	1995	2000	2005	2010
RSA 1	100	113	125	136	156	173	200
NORTH HALF NGA	100	113	125	136	156	173	200
RSA 2	54,897	60,301	65,775	75,359	85,411	94,260	102,623
SANTA PAULA GA	6,122	6,696	7,350	7,800	8,250	8,700	9,016
SANTA PAULA NGA	416	455	488	549	580	641	681
OJAI GA	2,974	3,265	3,406	3,438	3,467	3,492	3,513
OJAI NGA	135	152	166	180	193	207	221
VENTURA GA	43,638	47,972	52,384	61,195	70,479	78,539	86,328
VENTURA NGA	413	482	517	552	597	633	674
VENTURA RIVER GA	1,143	1,215	1,400	1,580	1,762	1,963	2,098
VENTURA RIVER NGA	56	64	64	65	83	85	92
RSA 3	75,219	87,949	101,839	114,466	128,956	143,095	158,800
CAMARILLO GA	14,981	16,861	19,699	21,808	24,519	25,662	28,016
CAMARILLO NGA	614	1,030	1,364	1,459	1,474	1,527	1,566
LAS POSAS NGA	678	832	895	941	1,006	1,074	1,139
OXNARD GA	40,562	48,526	57,600	66,780	77,400	89,100	101,447
OXNARD NGA	7,218	8,100	9,062	9,792	10,608	11,351	13,078
PORT HUENEME GA	11,166	12,600	13,219	13,686	13,949	14,381	14,554
RSA 4	16,200	22,126	28,381	33,752	40,250	45,480	50,974
MOORPARK GA	2,030	3,137	4,604	5,326	5,861	6,045	5,939
MOORPARK NGA	0	0	173	367	567	772	1,000
SIMI VALLEY GA	12,130	16,315	20,644	24,783	30,293	34,889	40,069
SIMI VALLEY NGA	2,040	2,674	2,960	3,276	3,529	3,774	3,966
RSA 5	24,973	30,719	36,684	43,218	48,856	55,301	61,419
OAK PARK GA	45	49	263	521	670	812	1,020
OAK PARK NGA	0	0	0	0	0	0	0
THOUSAND OAKS GA	24,830	30,573	36,267	42,588	48,070	54,366	60,267
THOUSAND OAKS NGA	98	97	154	109	116	123	132
RSA 6	2,900	3,177	3,798	4,084	4,199	4,489	4,805
FILLMORE GA	2,155	2,369	2,813	3,061	3,137	3,348	3,602
FILLMORE NGA	405	448	538	535	558	602	650
PIRU GA	187	196	253	277	280	299	308
PIRU NGA	153	164	194	211	224	240	245
COUNTYWIDE TOTAL	174,289	204,385	236,602	271,015	307,828	342,798	378,821

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RSA = Regional Statistical Area
NGA = Nongrowth Area
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FIGURE 3.4.4

1980-2010 RETAIL EMPLOYMENT FORECAST

AREAS	CENSUS 4/1/80	1985	1990	1995	2000	2005	2010
RSA 1	10	11	13	14	17	19	22
NORTH HALF NGA	10	11	13	14	17	19	22
RSA 2	9,272	10,138	10,836	12,454	14,040	15,592	16,833
SANTA PAULA GA	918	1,071	1,250	1,482	1,650	1,914	2,109
SANTA PAULA NGA	8	5	5	5	6	6	6
OJAI GA	629	751	817	860	867	908	940
OJAI NGA	8	11	11	11	11	10	10
VENTURA GA	7,418	7,994	8,319	9,513	10,735	11,779	12,608
VENTURA NGA	15	14	14	14	13	13	13
VENTURA RIVER GA	276	292	420	569	758	962	1,147
VENTURA RIVER NGA	0	0	0	0	0	0	0
RSA 3	9,932	11,403	13,478	15,450	16,826	18,937	20,851
CAMARILLO GA	2,187	2,698	3,152	3,489	3,923	4,106	4,375
CAMARILLO NGA	4	14	16	15	11	8	5
LAS POSAS NGA	62	75	73	71	70	68	66
OXNARD GA	7,031	7,764	9,216	10,684	11,610	13,365	14,861
OXNARD NGA	90	96	96	96	96	96	96
PORT HUENEME GA	558	756	925	1,095	1,116	1,294	1,448
RSA 4	3,900	5,240	6,425	7,844	8,990	10,052	11,237
MOORPARK GA	295	345	645	905	1,114	1,330	1,485
MOORPARK NGA	0	0	0	0	0	0	0
SIMI VALLEY GA	3,605	4,895	5,780	6,939	7,876	8,722	9,752
SIMI VALLEY NGA	0	0	0	0	0	0	0
RSA 5	6,200	9,783	10,894	12,393	13,063	15,262	14,658
OAK PARK GA	0	0	11	36	74	114	186
OAK PARK NGA	0	0	0	0	0	0	0
THOUSAND OAKS GA	6,200	9,783	10,880	12,351	12,979	14,135	14,456
THOUSAND OAKS NGA	0	0	3	6	10	13	16
RSA 6	390	463	619	719	817	922	1,068
FILLMORE GA	359	426	563	643	722	804	926
FILLMORE NGA	21	27	26	26	25	25	24
PIRU GA	10	10	30	50	70	93	118
PIRU NGA	0	0	0	0	0	0	0
COUNTYWIDE TOTAL	29,704	37,038	42,265	48,874	53,753	60,784	64,669

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Land Use Appendix

RSA = Regional Statistical Area
NGA = Nongrowth Area
GA = Growth Area

FIGURE 3.4.5

COMPARISON OF EMPLOYMENT HOLDING CAPACITIES AND YEAR 2000 EMPLOYMENT FORECASTS

AREAS	TOTAL EMPLOYMENT		RETAIL EMPLOYMENT	
	HOLDING CAPACITY	YEAR 2000 FORECAST	HOLDING CAPACITY	YEAR 2000 FORECAST
RSA 1	174	156	26	17
NORTH HALF NGA	174	156	26	17
RSA 2	81,218	85,411	25,168	14,040
SANTA PAULA GA	10,346	8,250	2,817	1,650
SANTA PAULA NGA	2,181	580	0	6
OJAI GA	4,066	3,467	1,557	867
OJAI NGA	376	193	26	11
VENTURA GA	61,366	70,479	19,096	10,735
VENTURA NGA	620	597	13	13
VENTURA RIVER GA	2,063	1,762	1,581	758
VENTURA RIVER NGA	200	83	78	0
RSA 3	131,649	128,956	29,362	16,826
CAMARILLO GA	27,739	24,519	11,239	3,923
CAMARILLO NGA	3,221	1,474	279	--
LAS POSAS NGA	982	1,006	107	70
OXNARD GA	71,536	77,400	14,809	11,610
OXNARD NGA	11,509	10,608	0	96
PORT HUENEME GA	16,662	13,949	2,928	1,116
RSA 4	117,388	40,250	21,041	8,990
MOORPARK GA	10,751	6,851	2,709	1,114
MOORPARK NGA	37	567	0	0
SIMI VALLEY GA	105,231	30,293	18,332	7,876
SIMI VALLEY NGA	1,369	3,529	0	0
RSA 5	41,076	48,856	13,843	13,063
OAK PARK GA	1,032	670	301	74
OAK PARK NGA	43	0	43	0
THOUSAND OAKS GA	39,814	48,070	13,312	12,979
THOUSAND OAKS NGA	187	116	187	10
RSA 6	9,481	4,199	2,266	817
FILLMORE GA	7,721	3,137	2,161	722
FILLMORE NGA	620	558	0	25
PIRU GA	941	280	105	70
PIRU NGA	199	224	0	0
COUNTYWIDE TOTAL	380,986	307,828	91,706	53,753

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RSA = Regional Statistical Area
NGA = Nongrowth Area
GA = Growth Area

FIGURE 3.4.6

EMPLOYMENT/POPULATION RATIO

AREAS	1984	2000	LOW RANGE HOLDING CAPACITY	HIGH RANGE HOLDING CAPACITY
RSA 1	0.19	0.24	0.34	0.02
NORTH HALF NGA	0.19	0.24	0.34	0.02
RSA 2	0.40	0.50	0.37	0.29
SANTA PAULA GA	0.30	0.30	0.62	0.31
SANTA PAULA NGA	0.15	0.19	3.23	0.20
OJAI GA	0.36	0.36	0.53	0.33
OJAI NGA	0.06	0.07	0.18	0.04
VENTURA GA	0.54	0.63	0.35	0.33
VENTURA NGA	0.41	0.48	0.18	0.08
VENTURA RIVER GA	0.09	0.12	0.20	0.11
VENTURA RIVER NGA	0.04	0.05	0.13	0.04
RSA 3	0.42	0.44	0.61	0.32
CAMARILLO GA	0.32	0.33	0.41	0.32
CAMARILLO NGA	0.28	0.24	1.64	0.49
LAS POSAS NGA	0.40	0.43	0.49	0.11
OXNARD GA	0.38	0.43	0.59	0.26
OXNARD NGA	1.62	2.08	2.67	1.74
PORT HUENEME GA	0.63	0.58	1.01	0.61
RSA 4	0.21	0.25	0.79	0.48
MOORPARK GA	0.22	0.16	0.41	0.25
MOORPARK NGA	0.00	0.70	0.08	0.02
SIMI VALLEY GA	0.18	0.25	0.86	0.55
SIMI VALLEY NGA	1.91	1.73	2.20	0.24
RSA 5	0.28	0.34	0.34	0.14
OAK PARK GA	0.01	0.04	0.07	0.04
OAK PARK NGA	0.00	0.00	0.02	0.01
THOUSAND OAKS GA	0.30	0.38	0.38	0.16
THOUSAND OAKS NGA	0.08	0.08	0.22	0.03
RSA 6	0.22	0.22	0.85	0.23
FILLMORE GA	0.23	0.22	0.91	0.40
FILLMORE NGA	0.20	0.25	1.13	0.07
PIRU GA	0.14	0.13	0.63	0.35
PIRU NGA	0.82	0.80	0.31	0.02
COUNTYWIDE TOTAL	0.35	0.39	0.53	0.30

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NGA = Nongrowth Area
GA = Growth Area

FIGURE 3.4.7

EMPLOYMENT/HOUSING RATIO

AREAS	1984	2000	LOW RANGE HOLDING CAPACITY	HIGH RANGE HOLDING CAPACITY
RSA 1	0.30	0.39	0.56	0.03
NORTH HALF NGA	0.30	0.39	0.56	0.03
RSA 2	1.04	1.20	0.92	0.72
SANTA PAULA GA	0.89	0.80	1.64	0.82
SANTA PAULA NGA	0.52	0.58	9.82	0.61
OJAI GA	0.93	0.86	1.27	0.79
OJAI NGA	0.16	0.17	0.45	0.10
VENTURA GA	1.33	1.49	0.87	0.83
VENTURA NGA	0.68	0.80	0.29	0.14
VENTURA RIVER GA	0.25	0.29	0.54	0.29
VENTURA RIVER NGA	0.10	0.12	0.34	0.10
RSA 3	1.23	1.19	1.64	0.88
CAMARILLO GA	0.88	0.83	1.02	0.81
CAMARILLO NGA	1.00	0.75	5.10	1.52
LAS POSAS NGA	1.48	1.39	1.60	0.36
OXNARD GA	1.14	1.19	1.63	0.73
OXNARD NGA	6.25	7.03	9.01	5.90
PORT HUENEME GA	1.70	1.44	2.51	1.51
RSA 4	0.70	0.75	2.36	1.43
MOORPARK GA	0.71	0.48	1.19	0.71
MOORPARK NGA	0.00	1.67	0.19	0.04
SIMI VALLEY GA	0.61	0.76	2.61	1.65
SIMI VALLEY NGA	4.76	3.99	5.09	0.56
RSA 5	0.82	0.90	0.90	0.38
OAK PARK GA	0.03	0.29	0.20	0.13
OAK PARK NGA	0.00	0.00	0.06	0.02
THOUSAND OAKS GA	0.87	1.00	1.01	0.42
THOUSAND OAKS NGA	0.14	0.15	0.40	0.05
RSA 6	0.72	0.63	2.42	0.65
FILLMORE GA	0.74	0.62	2.56	1.13
FILLMORE NGA	0.59	0.68	3.07	0.19
PIRU GA	0.52	0.41	2.01	1.10
PIRU NGA	2.55	2.24	0.86	0.05
COUNTYWIDE TOTAL	1.02	1.04	1.42	0.80

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ventura county general plan



public facilities and services appendix

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES & SERVICES

APPENDIX

Adopted by the Ventura County Board of Supervisors - May 24, 1988

Amended - December 19, 1989

Amended - April 10, 1990

Amended - October 16, 1990

Amended - December 11, 1990

Amended - December 10, 1991

Amended - December 1, 1992

Amended - March 2, 1993

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES AND SERVICES APPENDIX

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4. PUBLIC FACILITIES AND SERVICES APPENDIX

4.1 INTRODUCTION

County government is concerned with providing many necessary public facilities and services at both a local and a regional level.

As growth throughout Ventura County occurs, a need is created for the expansion of public facilities and services. Funding for these have been more difficult to obtain since passage of Propositions 4 and 13. These initiatives have altered traditional public facilities and services financing mechanisms. As a result, more emphasis has been placed upon the utilization of fiscal impact studies which assist local officials in determining whether a particular project or scale of development in the community will generate sufficient revenues to defray the necessary public facility and service costs. Now, more than ever, the availability of public facilities and services is an important consideration in determining the economic feasibility of new development.

The Public Facilities and Services Appendix addresses ten types of public facilities and services directly related to physical development of the County: Transportation/Circulation (Roads and Highways, Transit, Rail Service, Airports, Harbors, and Pipelines), Water Supply, Waste Disposal Facilities, Utilities, Flood Control and Drainage, Law Enforcement and Emergency Services, Fire Protection, Education, Parks and Recreation, plus Other Public Buildings and Grounds. In some instances, facilities and services are owned and/or operated by the County of Ventura, or may be provided by an agency governed by the Board of Supervisors. In other cases, facilities and services are owned and operated by independent governmental entities or private companies.

The intent of this Appendix is to assess the current status of each of the aforementioned public facilities and services and to evaluate the abilities of service-providing agencies to accommodate projected growth. Because of their high costs and lasting impacts, provision of public facilities and services has become an issue of major importance. Careful planning for public facilities and services is needed to avoid uncontrolled growth and to ensure efficient use of scarce public funds. The network of publicly-owned facilities, such as roads, streets, water and sewer facilities, public buildings, and parks, form the infrastructure of Ventura County. While capital facilities are built to accommodate present and anticipated needs, some play a major role in determining the location, intensity, and timing of future development.

The Public Facilities and Services Appendix provides the background information and analysis necessary to establish the **goals**, **policies** and **programs** which are part of the Public Facilities and Services Chapter of the Ventura County General Plan, with the overall goal of providing those necessary facilities and services to the residents of Ventura County.

The words shown in **bold face** within this Appendix are defined in the Goals, Policies and Programs Glossary (separate document).

4.2 TRANSPORTATION/CIRCULATION

The Government Code (Sec. 65302(b)) requires that a general plan contain a circulation "element" consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use "element" of the General Plan. The Transportation/Circulation Section describes the Roads and Highways, Transit, Rail Service, Airport, Harbor and Pipeline (including oil and natural gas) facilities in Ventura County.

4.2.1 ROADS AND HIGHWAYS

The Roads and Highways section addresses the thoroughfares requirements of the general plan by examining the existing and proposed regional road network for the unincorporated area of the County.

4.2.1.1 Existing Regional Road Network

The 1986 Regional Road Network map (Figure 4.2.1 - separate map) depicts existing **freeways/expressways, conventional state highways, primary** and **secondary arterials** and **major collectors. Minor collectors** and **local streets/roads** are not shown because the myriad of small streets would be unreadable on the map and because such non-thoroughfares (by definition) are not required by the Government Code to be depicted. Information regarding the regional road network in the unincorporated portion of the County includes number of **lanes** (a.k.a., **road cross sections**) and **average daily traffic** (ADT). Within the ten incorporated cities in the County, major city streets and all conventional state highways are depicted on the map for locational purposes only, without reference to number of lanes or ADTs.

The cross section and ADT information for the County arterials and major collectors shown on the 1986 map were derived from the Ventura County Public Works Agency's April, 1986 Road Index-Inventory. The cross section information for the freeways/expressways was provided by the California Department of Transportation (CALTRANS) to the County in 1987 and the ADTs are from CALTRANS 1986 Traffic Volumes Report.

The number of lanes and ADT on a given road are two variables that contribute to an understanding of that road's general traffic condition. The traffic condition is referred to as **Level of Service** (LOS). LOSs are based on the following six step hierarchy:

LOS	Traffic Conditions
"A"	Free uninterrupted low volume flow at high speeds with no restriction on maneuverability (lane changing) and with little or no delays.
"B"	Stable flow with some restrictions to operating speed occurring.
"C"	Stable flow but with speed and maneuverability restricted by higher traffic volumes. Satisfactory operating speed for urban locations with some delays at signals.
"D"	Approaching unstable flow with tolerable operating speeds subject to considerable and sudden variation, little freedom to maneuver and with major delays at signals.
"E"	Unstable flow with volume at or near capacity, lower operating speeds and major delays and stoppages.
"F"	Forced flow operation with low speeds and stoppages for long periods due to congestion. Volumes below capacity.

Under existing County Road Standards, in order to maintain at least a LOS "C", a two-lane road should not exceed 10,000 ADT, a four-lane road should not exceed 24,000 ADT, a six-lane road should not exceed 36,000 ADT and an eight-lane road should not exceed 48,000 ADT. Since the 1986 Regional Road Network Map (Figure 4.2.1) shows number of lanes and ADT's, it can be derived from the maps whether an existing road's LOS will exceed LOS "C" during peak hours. The number of lanes/ADT/LOS relationship indicated above should not be viewed as absolute, as other factors such as distances between intersections (with types of control), posted speeds, surface conditions, lane separations, and rural versus urban location help to dictate what a road's LOS actually is.

4.2.1.2 2010 Regional Road Network

The projected County network for the year 2010 is depicted on the 2010 Regional Road Network Map (Figure 4.2.2). The information shown on the map was developed from the Ventura County Area Transportation Study (VCATS). VCATS was prepared by the Southern California Association of Governments (SCAG) in cooperation with the Ventura County Public Works Agency (PWA), the County Planning Division, and CALTRANS.

The methodology employed in preparing VCATS involved the collection of population, dwelling unit and employment forecasts by geographic subareas. The geographical sub-areas that were selected were based on the County's existing Growth Area/Non-Growth Area division of the County. The County is divided into 31 such sub-areas (see Land Use Appendix). These sub-areas are also used by the County for population and dwelling unit projections that are used in the Air Quality Management Plan, Water Quality Management Plan, and Spheres of Influence Plan.

The study base year of 1984 was selected because that year represented the most accurate data available at the time VCATS was initiated. The 1984 data included social (population and dwellings) and economic (employment and income) information. The data, by sub-areas, was used by SCAG as a technical data base for the VCATS project. SCAG used the Urban Transportation System (UTPS) and the TRANPLAN computer models to estimate the year 2010 socioeconomic indicators and to project the County road network with ADTs, for the year 2010.

Socioeconomic indicators were developed by the County and SCAG for each of the sub-areas. The table below shows examples of Countywide socioeconomic indicator input data (1984) and projections for the year 2010.

Indicator	1984	2010
Total County Population	578,905	893,770
Single family dwelling units	118,910	266,424
Total all dwelling units	197,954	349,143
Percent single family dwelling units	60.1%	76.1%
Average population per dwelling unit	2.92	2.56
Average dwelling units per acre	0.17	0.30
Total work force population	249,118	481,157
Total jobs within County	200,203	378,821
Percent of total jobs in retail	17.8%	16.5%

Similar tables for each of the 31 sub-areas are contained within the VCATS document and the Land Use Appendix.

The methodology employed to obtain the 2010 Regional Road Network map used the 1984 and the projected 2010 socioeconomic data as well as other variables such as road type (e.g., limited access freeway, County roads cross sections, etc.), locations (e.g., downtown, rural, etc.), bus lines (e.g., routes, operating speeds, headways, etc.), and roadway improvements made since 1984 and pending (now funded) improvements. This information was used in various computer gravity models (e.g. SCAG Regional Transportation Model, CALTRANS' LARTS model and UTPS) to predict trip generation and distribution information that resulted in the 2010 Regional Road Network map.

The estimation of the number of lanes needed in 2010 for all County maintained thoroughfares is based upon projected ADT at LOS "C", as described in Section 4.2.1.1 above. For CALTRANS maintained highways, expressways and freeways, the number of lanes is based upon projected ADT at LOS "D". However, no road widening is indicated on State Route 33, between Casitas Springs and the City of Ojai, pursuant to long-term objections to road improvements expressed by some Ojai Valley residents due to their perceived concerns that such improvements would foster unwanted growth in the area.

The 2010 Regional Road Network map uses the same graphic format as the 1986 Regional Road Network map. The 2010 map shows the projected ADT's and lanes necessary for existing and future roads to accommodate the projected ADT's. Projected ADT's are shown for all freeways/ expressways, as well as for County arterials and major collectors. Also depicted on the 2010 map are existing and proposed major city streets and State highways as obtained from the respective city's long range street plans. However, as on the 1986 map, ADTs and cross sections are not indicated for streets nor conventional state highways within a city's 1986 boundary.

The 2010 map also depicts the areas that each city might annex in the future by indicating a city's Sphere of Influence (the probable ultimate boundary of each city). Within each city Sphere, the city's proposed major streets (as depicted on their respective street plans) are also shown.

The 2010 Regional Road Network includes a proposed State Route 1 Bypass which generally runs east of the City of Oxnard along the existing Rice Avenue alignment. While the State is still reviewing a Project Study Report for this facility, the freeway is included due to high projected traffic volumes (VCATS, 1987). The extension of this freeway north of U.S. 101 (eventually connecting to the existing Simi Valley Freeway in Moorpark) is not shown on the 2010 Regional Road Network due to very low traffic volumes projected for 2010. However, it may be prudent to avoid development which would adversely affect the CALTRANS adopted alignment in order not to preclude CALTRANS' future ability to construct this freeway at a future date when traffic studies warrant it (after 2010).

As mentioned above, the 2010 map includes the number of lanes necessary for each road to accommodate the projected ADTs for the year 2010. Figure 4.2.3 lists only the road improvements in the

unincorporated area that have been completed or have been funded (but not built yet) since the VCATS project was initiated. This updated information was provided to SCAG and is reflected in the VCATS 2010 projections.

4.2.1.3 Modes of Transportation

Modes of transportation utilizing the County Regional Road Network vary considerably from the predominate automobile to trucks carrying commodities and goods, bus transit, and bicycles. Bicycles don't utilize the same travel lanes, but use part of the same right-of-way.

Automobile: The automobile remains the most popular form of transportation in Ventura County. The California Department of Motor Vehicles reports that 358,563 fee paid automobiles were currently registered in Ventura County as of December 31, 1986. During that same year there were 426,900 licensed drivers. The resulting ratio of licensed drivers to fee paid automobiles is 1.19. This ratio indicates that the population, in general, relies heavily on the use of the automobiles for transportation.

Trucks: According to Public Works Agency Transportation Department estimates, approximately 10% of all vehicle trips are trucks.

Bus Transit: For a complete discussion of bus transit in Ventura County, refer to Section 4.2.2 (Transit Service).

Bicycles: The bicycle is a realistic and viable alternative to the automobile. Its use can improve air quality and vehicle congestion, and it can make significant reductions in vehicles' noise pollution, fuel consumption and parking needs. The bicycle can be a commute mode by itself or be used as a feeder to mass transit operations.

Bikeways are one element of an effort to improve bicycling safety and convenience, either to help accommodate motor vehicle and bicycle traffic on shared roadways, or to complement the road system to meet needs not adequately met by roads.

The "General Road Design Policies" portion of the County of Ventura Public Works Agency Road Standards states that "turning lanes at intersections and bicycle lanes may require Right-of-Way and improvement widths greater than those shown on the B series plates."

Due to high road construction costs, only a few County roads where either parking is prohibited in each direction or the right-of-way width is increased, actually contain bicycle lanes. **Class II bicycle lanes** (paved area within road for preferential use by bicycles) require an additional ten feet of right-of-way and pavement (i.e., five feet in each direction).

An alternative would be to maintain and improve the width and quality of the surface of the right hand portion of existing roads so they are suitable for bicycle traffic (**Class III bicycle route**).

Bicycle and pedestrian improvement projects in Ventura County are regularly funded by VCAG's Executive Committee with TDA Article 3 allocations of SB 821 money.

Countywide bicycle plans are developed to the extent possible by cooperative effort between County and cities staffs in order to

coordinate planning and funding. For example, the County is working with the cities of Ojai and Ventura to construct the Ojai Valley Trail, described below. The County also worked with the cities of Oxnard and Ventura to construct a bicycle bridge over the Santa Clara River, which connects with the Harbor Boulevard Bike Lane between Oxnard and Ventura.

Description of County Bicycle Facilities:

- Victoria Bikeway: This was constructed in the mid-1970's. A Class I path parallels Victoria Avenue from Olivas Park Drive to Gonzales Road and a Class II bike lane is available for bicyclists from Gonzales Road to Channel Islands Boulevard.

- Harbor Boulevard Bike Lane: This Class II coastal facility has been striped along Harbor Boulevard based on the availability of local funding. As a link between projects in Oxnard and Ventura, the County constructed a bicycle bridge over the Santa Clara River to provide safe travel between the two cities.

- Ojai Valley Trail: This is a 9.5-mile by 50-foot multi-purpose Class I trail utilizing the abandoned Southern Pacific Railroad right-of-way from the City of Ojai to Foster Park. A split-rail fence separates the horses from the pedestrians and bicyclists. One side of the trail is paved with asphalt for bicyclists, and the other with wood chips and gravel, a more suitable roadbed for horses. Currently, about 4.2 miles of the Ojai Trail have been completed.

4.2.2 TRANSIT SERVICE

In Ventura County, there are several public and private bus transit operators. These are described below.

- The South Coast Area Transit (SCAT) serves Ojai, Ventura, Oxnard, Santa Paula, Port Hueneme and much of the unincorporated area in between. Buses run seven days a week (excluding some holidays).

- The County, along with the Cities of Camarillo and Thousand Oaks, contracts for the Interconnect Bus to serve Westlake Village, Thousand Oaks, Camarillo, Oxnard, and Ventura. Interconnect operates weekdays, via peak-hour express and regular midday runs. The bus meets the Southern California Rapid Transit District bus in Westlake for inter-county trips to Los Angeles County. The County also contracts for transit service in the unincorporated communities of Oak Park, El Rio and Nyeland Acres.

- Fillmore Area Transit Company (FATCO) provides weekday bus service to Fillmore, Santa Paula, Ventura and Piru. FATCO provides this service under a contract with the County and City of Fillmore. FATCO also operates the Fillmore City dial-a-ride.

- Camarillo Bus Service serves the intracity bus needs of the City of Camarillo. The City also contracts with the County and the City of Thousand Oaks for "Interconnect" bus service.

- The Simi Valley Transit System operates in Simi Valley, Chatsworth and Moorpark. The Moorpark College route connects with the Thousand Oaks Transit System.

- The Thousand Oaks Transit System serves Thousand Oaks, Newbury Park and Westlake Village. Also, the City of Thousand Oaks works with the County and Camarillo to fund the intercity "Interconnect" bus.

- Greyhound Bus Lines provides regular long distance travel service and stops at seven cities in the County: Camarillo, Fillmore, Oxnard, Santa Paula, Simi Valley, Thousand Oaks and Ventura, plus Piru and Point Mugu.

- An airport bus service company, Great American Stagelines, makes trips to Los Angeles International Airport and occasionally to Burbank. Intercity bus service is also provided by Great American Stagelines to Ventura, Oxnard, Camarillo, Thousand Oaks, Westlake and Woodland Hills.

- All ten incorporated cities and all major Ventura County communities have a program to transport senior citizens to meal sites and the delivery of meals to seniors, known as Meals on Wheels. This program is administered by Public Social Services Agency with a subcontract to each local community.

- The Senior Survivalmobile serves senior citizens countywide during medical emergencies, with the help of volunteers and their cars. This program is also administered by Public Social Services Agency.

- Taxicab companies are available in all cities except Fillmore, Moorpark and Ojai.

- Commuter Transportation Services (aka Commuter Computer), a regional ride-sharing and marketing agency, arranges inter-county and local carpools, van pools and bus pools. Riders can park their cars free all day at ten park and ride lots located in Camarillo, Simi Valley, Thousand Oaks and Ventura.

The County Public Works Agency Transportation Department has been designated by the Board of Supervisors as the County department responsible for transit planning, coordination and project implementation.

To accomplish this goal, the County staff regularly works with other County departments, VCAG and SCAG, the other area transit operators, and local, State and Federal agencies.

The County assists whenever needed in coordination of services and institutional arrangements and is also responsible for funding a number of different operations. In FY 1986/87, as has happened in past years, the County assigned TDA funds to SCAT for service to the unincorporated communities in its areas. One-third of the costs for the regular and express Thousand Oaks/Camarillo/Ventura Interconnect Bus were paid with a County TDA Article 8c allocation. Also funded were contract services in the Fillmore/Piru area, and between the community of El Rio and the City of Oxnard. Other recipients of County funds were Commuter Computer, which got an operations grant of FAU money in support of a full-time Ventura office, and the numerous public social service agency operations in the area which were funded through a variety of sources.

4.2.3 RAILWAY SERVICE

County Railway Service includes passenger rail service on Amtrak and freight rail service by Southern Pacific and the Ventura County Railway Company.

4.2.3.1 Passenger Service

Amtrak passenger rail service has served Oxnard for many years and began serving Simi Valley in October 1986. Amtrak passes through the Oxnard and Simi Valley stations daily, with one run going north and the other south. The Coast Starlight northbound train leaves Simi Valley and Oxnard late morning. The southbound leaves Oxnard and Simi Valley in the early evening. Nationwide connections may be made in Los Angeles. Amtrak bus service is available to Los Angeles Union Station from Ventura, Oxnard and Simi Valley. Expansion of service along the Santa Barbara to Los Angeles route is expected soon.

4.2.3.2 Freight Service

The Southern Pacific Transportation Company provides intra-state and trans-continental rail freight service from its main coast line which runs from the Santa Barbara County line along the coast south through Ventura to Oxnard and then east through Camarillo, Moorpark, Simi Valley to the Los Angeles County line for a distance of 48.9 miles. A 28.6 mile branch line travels along the Santa Clara River Valley from Montalvo in a northeasterly direction through Santa Paula and Fillmore to Piru.

The Ventura County Railway Company is a local railroad connecting the Southern Pacific tracks with the U.S. Naval Construction Battalion Center, Port Hueneme Harbor and industrial parks in Oxnard, south of Fifth Street. The Ventura County Railway Company maintains 11.8 miles of route miles and about 18 track miles.

The Ventura County Railway Company began in 1905 as the Bakersfield and Ventura Railway but was renamed in 1911 as the Ventura County Railway Company when the proposed extension to Bakersfield was dropped. The present railroad with 15 employees has its headquarters at 250 East Fifth Street in Oxnard. The Ventura County Railway Company transports a variety of freight including industrial, agricultural, chemical, government related, and automobiles and small trucks for the Mazda Motors of America's port facility in Port Hueneme.

One Ventura County Railway track crosses Fifth Street and splits into two interchange tracks at the west end of the Southern Pacific yard. Near the Ventura County Railway office, the shortline's track divides, with one heading south a couple of blocks to the enginehouse/diesel shop. The other track goes southeast to a small yard. A number of industries, such as a chemical company, tire dealers, a fertilizer company and vegetable packing plants are located in this area, known as Oxnard Industrial Plaza. Beyond the yard, a wye is located near Wooley Road.

From the wye one track heads south, crossing California Highway 1 (Pacific Coast Highway). Known as the South Oxnard Branch, this line runs 5.4 miles to the South Oxnard Industrial Area and to the docks at Port Hueneme. Along the way, the track passes Donlon and Round Mountain Junction. Just south of the junction, near Arnold, the Diamond Spur and Edison Branch curve left off the South Oxnard Branch. These two lines and their sidings serve the South Oxnard Industrial Area. The South Oxnard Branch curves westward, enters the city of Port Hueneme, and terminates at the Oxnard Harbor District docks. Customers in the industrial area include oil companies, lumber yards, offshore oil drilling supply companies,

vegetable packing plants and the Kaiser Aluminum plant. The Edison Branch continues to Southern California Edison's Ormond Beach power plant. The power plant receives very little rail traffic.

Back at the wye in downtown Oxnard, the other track (the Patterson Branch), heads west for Wilds, 3.5 miles away. The track runs alongside Wooley Road (and down the center median for 1.4 miles) to Patterson Junction. At this point the track curves south 90° and heads south alongside Patterson Road. Patterson Junction once had a track continuing west and then north to beet dumps. As the present branch continues southward it enters Port Hueneme and then comes to Wilds (named after W. N. Wilds, a longtime Ventura County Railway employee in the 1940s), once the site of a sugar beet dump. The only thing to mark the location today is the boundary of the Navy base. From that point on, the Navy owns the trackage. The base, officially known as the U.S. Naval Construction Battalion Center, has a small yard just inside the fence and the Ventura County Railway Company occasionally drops off cars loaded with Navy trucks, bulldozers and related construction equipment and materials. U.S. Navy GE center cab 80-tonner 65-00349 switches the Navy-related parts of the base. The Ventura County Railway switches several civilian companies on the base. Civilian and military business coexists on the base because it's the only deep-water seaport between San Francisco Bay and the Long Beach/Los Angeles ports. Among the customers on the base serviced by the Ventura County Railway is the Mazda Motors of America port facility. Mazda Motors is one of the railway's largest sources of revenue.

4.2.4 AIRPORT FACILITIES

There are four airports in Ventura County, which include County owned and operated airports at Camarillo and Oxnard, a private airport at Santa Paula and the Federally operated Point Mugu Naval Air Station and runway at San Nicholas. The California Air National Guard has an operation on a 208 acre site adjacent to Pt. Mugu NAS. A description of each airport and the County Airport Administration follows (Refer to Figure 4.2.4 for the location of each airport):

4.2.4.1 County Airports

County Department of Airports was created in December 1984 by the Board of Supervisors, independent from the former Property Administration Agency. The Department of Airports oversees the development, operations, repair and maintenance to airports in Camarillo and Oxnard.

The Aviation Advisory Commission was established by the Board of Supervisors for the purpose of advising the Board on airport policy related matters. Airport authorities were established under the provisions of a Joint Powers Agreement between the County of Ventura and the City of Camarillo for the Camarillo Airport and a separate Airport Authority at Oxnard between the County and City of Oxnard.

- Oxnard Airport: The Oxnard Airport is a 212 acre facility located in Oxnard and, although within the corporate boundaries of Oxnard, is operated by the County of Ventura.

  The Oxnard Airport airside facilities include a single east/west runway (Runway 7/25), 5,950' long and 100' wide with an effective gradient of 0.19 percent. The runway is asphalt in composition and is rated with a gross loading weight strength of 30,000 lbs for aircraft with single wheel landing

gear configurations, and 53,000 lbs for aircraft with dual wheel configurations. Due to a 137 foot church spire located east of the Airport, the Runway 25 landing threshold has been displaced 1,382 feet to the west. This reduces the Runway 25 landing length to 4,568 feet. It is also important to note that the primary approach path for the instrumented runway at Oxnard Airport is located directly above the Oxnard Civic Center. A parallel taxiway is available the full length of the runway and is connected to the runway by five connecting taxiways. Runway 25 is also equipped with a high speed taxiway exit.

A total of three major hangars, one medium hangar, and 123 small hangars (52 County owned and 71 private) are located at the airport. Aircraft storage space at the Airport consists of 56,100 square feet of hangar space, which will accommodate approximately 100 aircraft. In addition, 140 outdoor tie-down positions are available.

The four story, 80' high air control tower, built in 1960, is operated by FAA Air Traffic Controllers from 7 a.m. to 9 p.m.; of the 24-hour period the airport is open.

Excellent air navigation aids are available to guide pilots approaching the Oxnard Airport during poor weather conditions. Four published instrument procedures are available for the airport. The most precise of these is the Instrument Landing System (ILS) approach procedure to Runway 25 which allows a qualified pilot to descend solely by reference to instruments to 250 feet above the ground in visibilities as low as three-quarters of a mile. In addition, there are two non-precision Very High Frequency Omni Range (VOR) approaches, one to Runway 7 and the other to Runway 25, and a published Standard Instrument Departure (SID) profile.

Facilities at the Oxnard Airport consist of the passenger terminal building and paved automobile parking for 350 passenger vehicles and ten employee vehicles. Access to the terminal building is provided by West Fifth Street, a two-lane paved road. In addition, limited access is provided by Patterson Road. The terminal building itself is a modern structure consisting of approximately 10,000 square feet of usable space. Other facilities include maintenance shop, generator building, restrooms, warehouse, residence and sheds.

There are an estimated 140,000 annual aircraft operations at the Oxnard Airport, 90% for general aviation activities, 5% combined air taxi and commuter, and the remaining 5% used by helicopters. Oxnard Airport is served by three regional air carriers, which offer 18 daily flights to such market areas as Los Angeles, Sacramento and Santa Barbara.

- Camarillo Airport: The Camarillo Airport, owned and operated by the County of Ventura, was formerly known as the Oxnard Air Force Base. It is located three miles southwest of the center of the City of Camarillo and lies within the city limits. The city is 45 miles northwest of Los Angeles and 379 miles south of San Francisco and borders the Ventura Freeway (Highway 101). Camarillo lies within the Oxnard Plain approximately eight miles northeast of the Pacific coastline.

The Camarillo Airport encompasses 753 acres within both City and County jurisdictions. Although the airport lies within the city limits, the airport is owned and operated by the County. The portion of the east/west runway (Runway 8/26) which is being used for general aviation aircraft, is 6,020 feet long by 150 feet wide. Presently, the runway is served by a non-precision circling Very High Frequency Omni Range (VOR) instrument approach to the airport, which allows a pilot to descend to a decision height of 641 feet above ground level (AGL) in instrument meteorological conditions before making a circling approach to the runway. The new FAA control tower began operation at the airport in 1991. The FAA's ten employees operate the facility for 14 hours each day.

Facilities at the Camarillo Airport consist of a small (4,000 square foot) administration building, and adjacent public parking for approximately 50 automobiles. A total of four large hangars, six medium and 292 small hangars (122 County owned and 170 private) are located at the airport. Numerous former Air Force structures still exist at Camarillo Airport and are now being used for various uses (Refer to Section 4.11.3.2 for a discussion of County facilities at Camarillo Airport). Access to the airport is provided by the Ventura Freeway (Highway 101) to Las Posas Road (four lane/paved) and Pleasant Valley Road (two lane/paved).

For 1990, there were an estimated total of 222,000 annual aircraft operations at the Camarillo Airport, 93% for general aviation activities, 4% were Air Taxi operations, and the remaining 3% were helicopter activities.

4.2.4.2 Federal Airports

- Point Mugu Naval Air Station: The 4,500 acre Point Mugu Pacific Missile Test Center and Naval Air Station (NAS) is located at the western end of the agricultural lands of the Oxnard Plain, six miles southeast of Oxnard and 7-1/2 miles southwest of Camarillo. The Ventura County and Point Mugu Game preserves (private clubs not associated with the Navy) are located to the northwest of the base with the Camarillo State Hospital 4 miles northeast. The base is flanked by the Santa Monica Mountains on the east and the Pacific Ocean to the south.

  The Point Mugu Naval Air Station was originally developed during the 1943-1945 period of World War II. The installation during these years was an extension of the base at Port Hueneme and the early operations were those associated with the training of Seabee personnel.

  From 1946 to the present, the mission and the facilities at Point Mugu rapidly expanded. In 1948, Congress appropriated funds for land acquisition and military construction. In 1949, the Naval Air Station (NAS) was commissioned. The steel planking of Runway 9/27 was upgraded and in 1953, Runway 3/21 was built. Sand was pumped into the surrounding marshes to accommodate the construction of new buildings, hangars, shops, offices, and laboratories. By 1958, the Naval Air Missile Test Center became the Pacific Missile Range with a growth of from 612 employees in 1946 to 4,800 employees. In 1990, the Pacific Missile Test Center, the Naval Air Station, and other activities located at Point Mugu employed 11,111 persons.

The primary mission of the NAS is to maintain and operate facilities and provide services and material to support operations of the Pacific Missile Test Center, and other activities and units as designated by the Chief of Naval Operations.

The major tasks relative to the NAS missions are to provide in-flight service; serve as an all weather air station; maintain and operate an air terminal; provide radar approach/departure control services for the Oxnard Plain area; maintain and operate a 10,000 foot runway at Outlying Field San Nicolas Island; perform services in support of the Pacific Missile Test Center; and provide operational, logistic, and administrative support to tenants and assigned activities.

The primary mission of the Pacific Missile Test Center at Point Mugu is to perform test, evaluation, and provide development support of naval weapons systems and related devices. Major tasks related to this mission include missile research, development and testing, and a wide variety of support tasks.

In performance of their missions, Navy Units at Point Mugu require many varied and different types of aircraft. The on-base military aircraft fleet generally consists of approximately 120 aircraft. Several of these aircraft are associated with reserve squadrons.

The primary N/S runway 3/21 measures 11,100' x 200' and is utilized basically by the fixed wing military aircraft. The shorter E/W runway, 9/27 measuring 5,500' x 200', is used by light planes, helicopters and air club planes. However, either runway can be used by any type of aircraft as the use of the runway varies with wind, weather, demand and other factors.

Aircraft operations at Point Mugu are directly proportional to the levels of missile testing and requirements for pilot training which occur at the facility.

Point Mugu maintains an air traffic control center which controls all aircraft in southern Ventura County. A military approach control facility and control tower provides service seven days a week.

The number of aircraft operations at Point Mugu NAS is in excess of 70,000 per year. Hours of operation of the airfield are normally between 6 a.m. and 10 p.m. on Monday through Saturday, and from 8 a.m. to 6 p.m. on Sundays and holidays. In reality, however, utilization of the airfield is very low in the early morning and evening hours. The peak days of activity at Point Mugu usually occur on Wednesdays or Thursdays, whereas the least active day is Sunday. Peak hours vary from day to day, depending on changing mission requirements.

For further information on Point Mugu Pacific Missile Test Center and Naval Air Station, refer to Section 4.11.1.1.

- Channel Islands Air National Guard Base: The 146 Tactical Airlift Wing officially dedicated a new 208 acre installation September 1990. This property is north of Pt. Mugu NAS and is at the intersection of Hueneme and Navalair Roads.

  This California Air National Guard Wing relocated their C-130 aircraft from Van Nuys Airport beginning in 1989. Daily operational control and management is focused out of the State of California, Office of the Adjutant General with fiscal and liaison management being focused from the National Guard Bureau (Air) in Washington D.C. A technical force of 286 civilians, 25 contract employees, and 52 active duty personnel ensure weekday operations meet expected standards.

  Construction on the majority of the facilities structures was completed by the summer of 1990 at a cost of over $60 million. Two facilities will be constructed at a later date. They are a Fuel Cell Maintenance Hangar and a JP-5 (Fuel) Storage and Dispensing facility.

  The unit uses the Pt. Mugu NAS runway via a connecting 3,500 foot taxiway annexation for aircraft operations. Expected normal operations average 30 operations per day between 8:00 a.m. and 10:00 p.m. Monday through Friday, with an additional five return flights on weekends.

  Operations increase when this unit is tasked for Fire Support Missions in conjunction with the U.S. Forest Service or The California Department of Forestry.

  The mission of this unit is to train assigned units military war skills totalling over 1,500 personnel during Unit Training Assemblies held once a month and various two week active duty assignments. The Wing is an operational unit under the Air Force Military Airlift Command (MAC).

4.2.4.3 Private Airports and Landing Strips

The privately owned Santa Paula Airport is located within the city limits, south of State Highway 126. The airport is owned by the Santa Paula Airport Association, Ltd. and is operated by the owners (stockholders).

Currently there are several airport related businesses located at the Santa Paula Airport including the Santa Paula Flight Center which provides parts, supplies, instruction, fuel and maintenance, the airport cafe plus additional aircraft related businesses.

Airport facilities include an asphalt paved runway 04/22, 2650' x 45'. There are 56 hangars with 85 tie-downs. Virtually all of the estimated 52,400 annual aircraft operations at the airport involve general aviation aircraft. There is no tower, thus limiting hours of operation to daytime only. Helicopters also operate out of this facility.

Finally, there are a few privately owned and operated landing strips scattered throughout the County.

4.2.5 HARBORS

The Port of Hueneme is located entirely within the City of Port Hueneme. Serving as California's only deepwater port between Los Angeles and San Francisco, the Port of Hueneme's sphere of influence extends far into the southwestern United States and Western Canada.

The port is administered by the Oxnard Harbor District, which has jurisdiction over approximately 70 acres of onshore area and ten acres of waterway; the remainder of the harbor is under U.S. Navy jurisdiction.

The Oxnard Harbor District was formed for the purpose of the development of a harbor at the Port of Hueneme and the subsequent improvement and operation of that harbor. The District is empowered by its authorizing statute and by the California Harbors and Navigation Code (Sections 6000 et seq.) to acquire, construct, own, operate, control, or develop any and all harbor works or facilities within the limits of its established boundaries.

This district is governed by five elected harbor commissioners. The Oxnard Harbor District Board of Harbor Commissioners' primary goal continues to be the attraction of ocean cargo business. To the extent that the development of the ocean freight business will not be inhibited, the Board of Harbor Commissioners' goal has been to maximize revenue and create additional employment by encouraging the utilization of the Port of Hueneme facilities by the offshore oil industry and from other activities in which the District may legally engage.

The District's current operations involve only the ownership and operation of the commercial portion of the Port of Hueneme which consists of about one-third of the total Port of Hueneme complex. The balance is owned and operated by the U.S. Navy. The District is not connected in any way with the two marinas in Ventura County (Channel Islands Harbor and Ventura Harbor) which are under separate governing bodies.

The Port was constructed in 1938 onshore from Hueneme (submarine) Canyon. Tidal currents and flushing action keep the depth of the harbor relatively constant. The harbor is man made, and connected to the open sea by a jetty protected entrance channel. The outer part of the entrance channel terminates at the head of a submarine canyon which offers an excellent deepwater approach. Only occasional dredging is needed to maintain harbor depths ranging from 35 to 32 feet.

The uses of the existing ten acre water area within the Harbor is divided into four categories:

- Deep draft berths: The primary deep draft berths at the Port are three at Wharf 1 and two at Wharf 2. The water depth at MLLW (Mean Lower Level Water) is a minimum of 35' at berths of Wharf 1 and 32' MLLW at Wharf 2.

- Shallow draft moorings: Although the Port has no shallow berths as such, moorings are provided at the east end of the east-west channel for commercial and sport fishing boats.

- Turning basin: The central water area within the Port is a turning basin capable of maneuvering ships up to 900 feet in length. This area is not used for any other purpose.

- Entrance channel: The entrance channel is approximately 400 feet wide, with a navigable channel in the center about 300 feet wide. The channel provides a short run for vessels entering the harbor from the coastal shipping lanes or the open sea. The Channel Entrance Wharf can moor medium draft vessels.

The Port has six wharfs. Wharf 1 is 1,800 feet long and Wharf 2 is 1,400 feet long. They are used for cargo transfer, tanker lightering, and servicing oil supply vessels. Through a sharing agreement with the U.S. Navy, Wharves 3 through 6 may be used by commercial vessels if the commercial wharves are full. There are slips for commercial fishing vessels and sportfishing vessels. Offshore oil platform supply vessels generally dock alongside Wharf 1 or Wharf 2.

The Port of Hueneme handles a variety of commodities in addition to offshore oil and gas supplies. These include automobiles, bananas, citrus and fresh fruit, cannery fish, livestock, lumber, fuel, wood pulp, water, pipe, and other general cargo. The tonnage shipped through the port has increased steadily since 1971, when additional dredging operations allowed access of deeper draft ships. (Port dredged from 32' Mean Lower Level Water (MLLW) to 35' MLLW in 1975).

The Oxnard Harbor District was authorized by the U.S. Congress in 1983 to acquire approximately 18 acres of land and about 650 feet of wharf directly across from the commercial pier (Wharf 1). The wharf was constructed on land acquired by the Navy through condemnation at the beginning of World War II (1942). The expanded facilities, including modern terminal facilities, will increase port capacity both in terms of vessels and cargo tonnage. For example, Mercedes Benz and BMW started importing automobiles in 1988. The acquisition and expansion of the port will increase its cargo throughput capacity from 420,000 tons to over 800,000 tons.

The main vehicular access to the harbor area from Highway 101 is via Las Posas Road/Hueneme Road at this time and will be via the Rice Road bypass at some time in the future. Established truck routes exist on Harbor Boulevard and Victoria Avenue, Channel Islands Boulevard and Ventura Road. The Pacific Coast Highway (State Route 1) via Hueneme Road provides additional circulation to and from the south.

The Port of Hueneme is served by the Ventura County Railway Company with both northern and southern access. The northern line extends through the U.S. Naval Construction Battalion Center and provides rail service to Wharf 2. The southern line enters the Port of Hueneme from the east along an alignment south of Hueneme Road.

4.2.6 PIPELINES

Major pipelines within Ventura County carry crude oil and natural gas, generally along highways and railroad lines. The major crude oil and natural gas pipelines traversing Ventura County are owned by ARCO, Chevron, Mobil, Shell, Texaco and Union Oil. Most oil companies which have operations in Ventura County have pipelines located within their oil/gas lease areas, but do not operate major transporting pipelines. Four Corners Pipeline Company, a subsidiary of ARCO, is a private pipeline company regulated by the Public Utilities Commission that transports crude oil through their own lines and connects to other pipelines as needed. Four Corners Pipeline Company operates only their own pipeline facilities, and does not own any crude oil. There is also an existing Southern California Edison fuel line originating within the Oxnard Harbor

District which connects to the Ormond Beach Generating Station. Refer to Figure 4.2.5 for a map showing Energy Pipelines and Storage Facilities.

4.2.7 CONCLUSIONS

While the existing County Regional Road Network is generally adequate to meet present travel demands, Ventura County is confronted with the potential for significant population growth by the year 2010. This projected increase in population will place a major strain on the County's Regional Road Network. To meet this challenge, the Goals, Policies and Programs of the General Plan must address means of moving people and goods in the most efficient and cost effective manner possible, including expansion of the existing road network, encouraging alternate transportation modes (ridesharing, bicycling, transit, etc.), and disbursing peak traffic demand to better utilize the existing road network.

The Goals, Policies and Programs of the General Plan also encourages continued land use compatibility around existing airport facilities.

To evaluate the total circulation system, it is important to also consider all forms of transport including pipelines which move oil and gas through fixed systems.

The General Plan Goals, Policies, and Programs provide the basis for improving the circulation and transportation network in Ventura County in a complementary manner with the Land Use Portion of the General Plan.

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Val Hartley - Shell
Walter Hernandez - State Fire Marshall's Office
Steve Van Winkel - Union Oil
Wayne H. Waterman - Texaco

FIGURE 4.2.3
RECENTLY COMPLETED AND PENDING ROAD IMPROVEMENTS

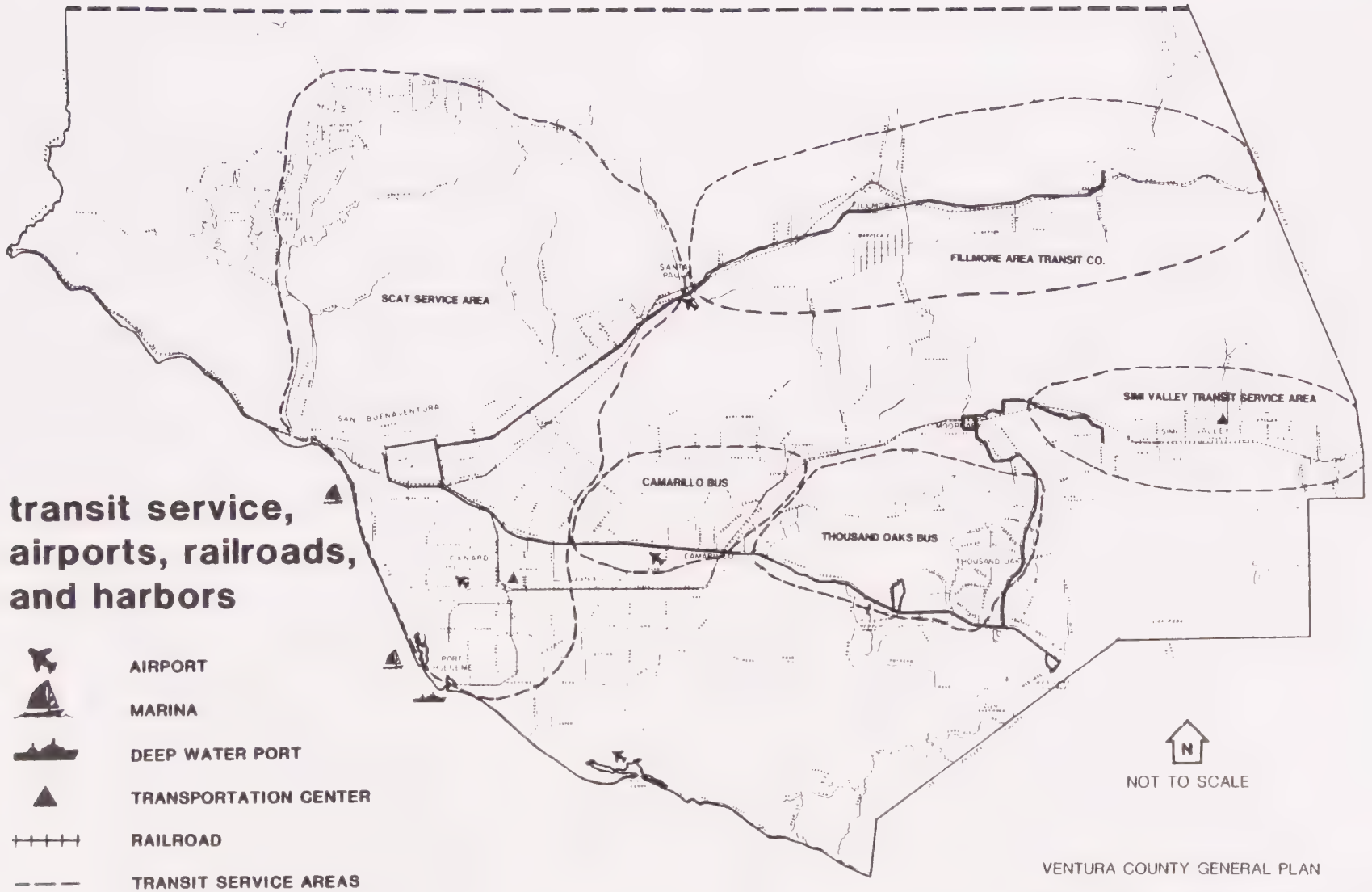
AS OF SEPTEMBER 1984

JURISDICTION	ROAD	SEGMENT	IMPROVEMENT	SOURCE	COMPLETION DATE
Caltrans	Rte. 101	Rte. 1 to Dawson Dr.	Widened from 2 to 3 lanes each direction	3	C
Caltrans	Rte. 101	Dawson Dr. to Top of Conejo Grade	Add 1 lane each direction	3	U
Caltrans	Rte. 101	Rte. 1 to Johnson Dr.	Widen 1 lane each direction due to Oxnard Town Center	4	P
Caltrans	Rte. 101 at Borchard Drive	Interchange	Widen overcrossing lanes to 4	1 & 2	P
Caltrans	Rte. 118 at Madera	Interchange	Add westbound on and eastbound off ramps	1	P
Caltrans	Rte. 126	Hall Rd. to "A" St.	Widen to 4 lanes	1	P
Caltrans	Rte. 23 at Rte. 118	Gap Closure	Const. Fwy/Fwy connection	1	P
Caltrans	Rte. 118	Rte. 126 to Rte. 232 (Vineyard Ave.)	Widen to 4 lanes (Vineyard Ave.)	1	P
Caltrans	Rte. 126	From 0.25 mi. west of Pacific to 0.4 mi. east of Center St.	Widen to 4 lanes	1	P
Caltrans	Rte. 126	Hallock Drive to Hall Rd.	Widen to 4 lanes	3	C
City of Oxnard	Auto Center Dr.	Rice Ave. to Rose Ave.	Construct new two-lane road	4	P
County	Victoria Ave.	Gonzales Road to Olivas Park Drive	Widen to 4 lanes	2	P
City of Thousand Oaks	Lindero Lyn Cyn. Rd.	End of Lindero Cyn. Rd. to Kanan Rd.	Construct new 4 lanes	3	C
County	Kanan Rd.	Lindero Cyn. Rd. to end existing Kanan Rd.	Construct new 4 lanes	3	U

Project Source

1: Included in 1986 STIP (State Transportation Improvement Plan) Funding Program
2: Included in 1988-92 RTIP (Regional Transportation Improvement Plan) Funding Program
3: Built 1984 to 1987
4: Assumed built by 2010 due to development projects

C = Completed Project
U = Under Construction
P = Planned Project



transit service, airports, railroads, and harbors

- AIRPORT
- MARINA
- DEEP WATER PORT
- TRANSPORTATION CENTER
- RAILROAD
- TRANSIT SERVICE AREAS
- INTERCONNECTING BUS ROUTE

SOURCE: VENTURA COUNTY PLANNING DIVISION
DATE: SEPTEMBER 1987

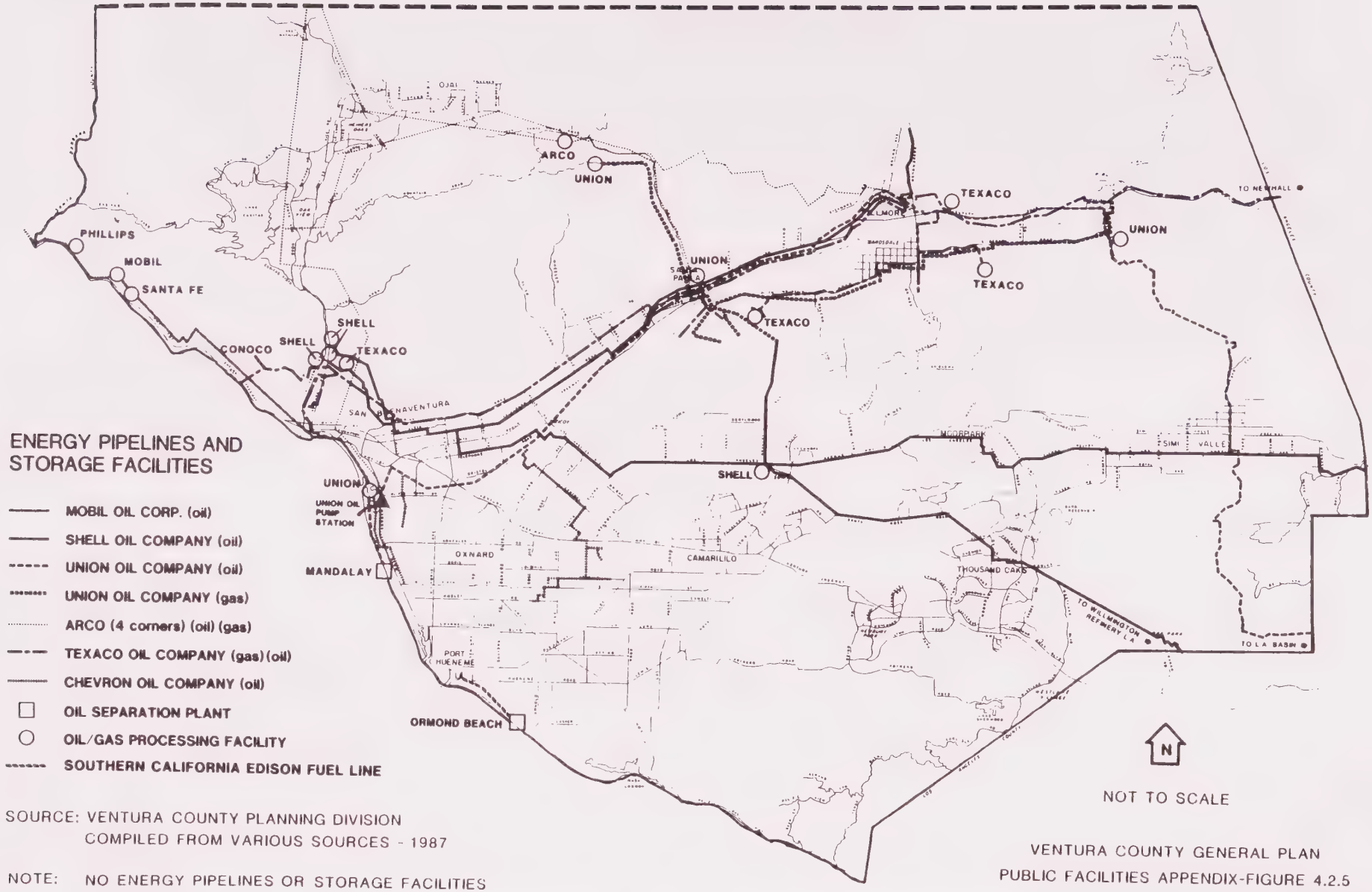
NOT TO SCALE

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.2.4

NOTE: NO TRANSIT SERVICE, PUBLIC AIRPORTS, RAILROADS OR HARBORS EXIST IN THE NORTH HALF.

NOTE: AIRPORT ON SAN NICHOLAS ISLAND



SOURCE: VENTURA COUNTY PLANNING DIVISION
COMPILED FROM VARIOUS SOURCES - 1987

NOTE: NO ENERGY PIPELINES OR STORAGE FACILITIES IN THE NORTH HALF

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX-FIGURE 4.2.5

4.3 WATER SUPPLY FACILITIES

Water Supply Facilities Section includes discussions on water sources, water users/suppliers, and issues related to water supply facilities.

4.3.1 WATER SOURCES

Ventura County's water supply is obtained from three major sources: groundwater, surface water, and imported water. A small amount of reclaimed water also is used.

4.3.1.1 Groundwater

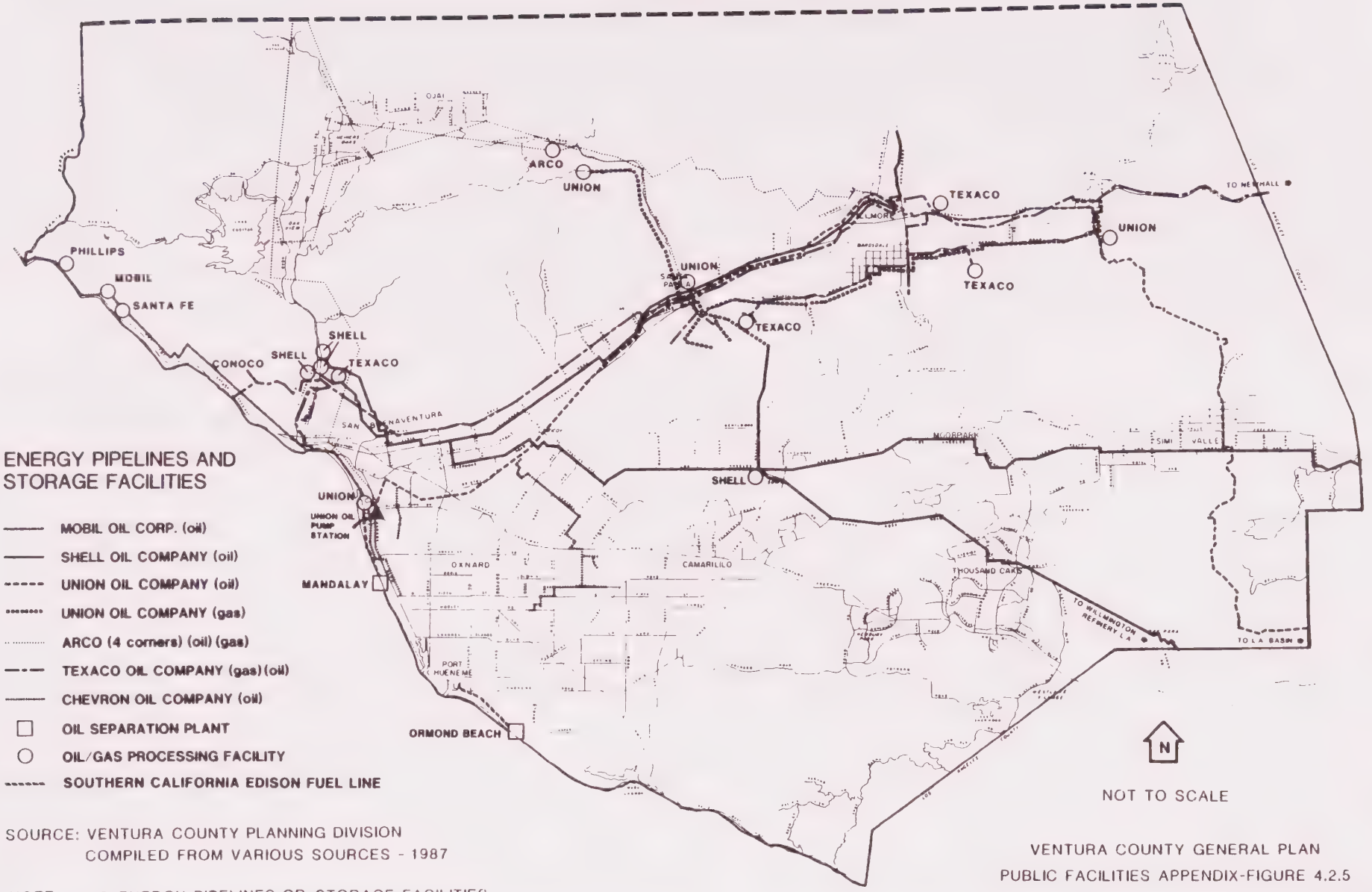
Groundwater is the single most important source of water; as of 1985 it provides about 67% of the water utilized in the County. Agricultural demand accounts for an estimated 86% of the total demand for groundwater in the County. Of the total water demand in 1985, 273,000 acre feet (AF) came from local groundwater sources. Because it is estimated that the local groundwater basins can safely supply only about 242,000 AF countywide, water users are extracting at least 31,000 AF more than is being naturally and artificially replenished. Groundwater is pumped extensively by individual well owners and purveyors. Purveyors either wholesale water to other purveyors or make deliveries directly to individual users. Since more groundwater is used than is replaced, overall, the County's groundwater reserves are slowly decreasing.

The County's groundwater supply is contained within five major aquifers. The aquifers are the Oxnard, Mugu, Hueneme, Fox Canyon, and Grimes Canyon. Both the Oxnard aquifer in the Oxnard Plain area and the Fox Canyon aquifer are being overdrafted. This overdrafting of the local water supply has caused a number of problems, most notably seawater intrusion in the Upper Aquifer system of the Oxnard Plain. Plans are currently underway to remedy the seawater intrusion problem caused by overdraft in the Oxnard Aquifer Zone. In December 1986, the U.S. Bureau of Reclamation approved a loan and grant of $18.73 million to help finance the Freeman Diversion Improvement portion of the seawater intrusion project. On June 26, 1987, the official signed contract was completed for the Seawater Intrusion Abatement Program between the U.S. Bureau of Reclamation and the United Water Conservation District.

4.3.1.2 Surface Water

Surface water resources in Ventura County are divided into two major hydrologic units (the Ventura River and Santa Clara-Calleguas Units) and into four other smaller hydrologic units (Rincon Creek, Cuyama, San Joaquin, and the Malibu Hydrologic Units). Refer to Figure 4.3.1 for a map of the major surface water sources in Ventura County.

Surface water is taken from Lake Casitas, Lake Piru and diversions from the Santa Clara and Ventura Rivers. As of 1985, it provided approximately 11% of the total water utilized in Ventura County. The primary source of surface water, Lake Casitas, is maintained by the Casitas Municipal Water District, which engages in both retail and wholesale sales of the lake's water. The Casitas Municipal Water District wholesales water to retailers for municipal, industrial, and agricultural uses within the Ojai Valley and the City of Ventura. The District also retails water directly to some users in the Ojai Valley and the North Coast of the County. Santa



ENERGY PIPELINES AND STORAGE FACILITIES

- MOBIL OIL CORP. (oil)
- SHELL OIL COMPANY (oil)
- UNION OIL COMPANY (oil)
- UNION OIL COMPANY (gas)
- ARCO (4 corners) (oil) (gas)
- TEXACO OIL COMPANY (gas) (oil)
- CHEVRON OIL COMPANY (oil)
- OIL SEPARATION PLANT
- OIL/GAS PROCESSING FACILITY
- SOUTHERN CALIFORNIA EDISON FUEL LINE

SOURCE: VENTURA COUNTY PLANNING DIVISION
COMPILED FROM VARIOUS SOURCES - 1987

NOTE: NO ENERGY PIPELINES OR STORAGE FACILITIES IN THE NORTH HALF

NOT TO SCALE

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX-FIGURE 4.2.5

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Clara River water is diverted by the United Water Conservation District to spreading grounds where it recharges the groundwater basin. The United Water Conservation District operates and maintains Lake Piru, the Freeman Diversion, and associated spreading grounds along the Santa Clara River. The District diverts Santa Clara River water to replenish the groundwater and to a number of water agencies on the Oxnard Plain. Several water purveyors and individuals also use some Santa Clara River water.

Ventura River water is diverted by the City of Ventura for use in the City's system. Some water is diverted from the Santa Clara and Ventura Rivers by individuals.

4.3.1.3 Imported Water

Imported water is obtained by Calleguas Municipal Water District (CMWD) from the Metropolitan Water District of Southern California (MWD) for delivery to purveyors in the southern and eastern portions of the county which includes the Cities of Thousand Oaks, Simi Valley, Camarillo and Oxnard. As of 1985, this imported water, which is State Project water, provides about 22% of the water utilized in the county. Although this is the only source of imported water at the present time, the Casitas MWD, United WCD, and the City of Ventura have jointly studied the feasibility of constructing various types of distribution facilities to import additional State Project water, to which they collectively hold a yearly entitlement of 20,000 acre feet. Studies to obtain additional State Project Water are continuing, including analysis of the appropriate institutional and financial arrangements. United WCD ordered their portion of the entitlement (5,000 AF/Y) to be delivered from Lake Castaic via Piru Creek to United's Lake Piru Reservoir. The delivery of the 5,000 AF started in the Spring of 1991.

4.3.1.4 Reclaimed Water

Water reclamation refers to the recycling or reuse of either treatment plant effluent (wastewater) or industrial process water. Reuse can occur onsite or be transferred to other uses offsite following treatment. The uses to which this reclaimed water can be put (e.g., irrigation, cooling) depend upon the quality of the "used" water and the quality required for subsequent uses.

Three of the 16 sewage treatment plants in Ventura County currently reclaim a portion of their effluent. Over a third of the Camarillo County Sanitation District's effluent is used for agricultural irrigation. The City of Ventura reclaims water to irrigate City parks and golf courses and a portion is released for estuary enhancement. The Camrosa County Water District reclaims water for agricultural irrigation. The City of Thousand Oaks' Olsen Road Plant formerly reclaimed some wastewater for golf course irrigation but discontinued the practice in 1981. The Las Virgenes Municipal Water District has implemented a water reclamation project for urban landscaping in Los Angeles County. The Las Virgenes MWD reclaimed water is also used in Ventura County for golf course irrigation at Lake Sherwood. Additionally, reclaimed water from Los Angeles County is being delivered to the Oak Park Area. In 1982, Camarillo Sanitary District completed an expansion of their existing reclamation for agricultural irrigation by increasing the capacity from 4.75 million gallons per day to 6 million gallons daily.

Several studies and proposals exist in the County for expanding existing reclamation or initiating new reclamation projects.

(1) The City of Ventura is examining the possibility of increasing reclamation, but no specific proposal has been made as of 1987.

(2) Two large scale reclamation projects were studied in 1981 under a Federal Clean Water (Section 201) grant. Both projects would supply agricultural irrigation water which has been treated at a tertiary level (Figure 4.3.2).

- Simi Valley Sanitation District Treatment Plant: This project involves supplying the agricultural area in the Las Posas Valley with approximately 6,000 AF/year over the next 15-20 years. Farmers in the Las Posas Valley currently obtain their water from the Fox Canyon Aquifer which is seriously overdrafted. As of 1987, the County was still seeking funding to construct the facilities for irrigation in the Las Posas Valley.

- Thousand Oaks Hill Canyon Treatment Plant: This project would result in the conveyance of about 13,000 AF/year of treated effluent to Oxnard Plain agricultural users, the largest agricultural area in the County. Use of this water would reduce demands on the Oxnard Plain's overdrafted aquifers.

The primary potential uses of reclaimed water in Ventura County are agricultural irrigation and irrigation of non-agricultural land such as parks and golf courses. The water quality standards which apply to these uses vary and are based on State and Federal Standards.

4.3.2 WATER USERS/SUPPLIERS

Figure 4.3.3 shows water demands in Ventura County.

As of 1990, there were more than 178 water purveyors in Ventura County, which include six city systems, eight privately owned companies, four other public water purveyors, 20 special water districts, and more than 100 mutual water companies and other public and private systems of varying sizes (Navy bases, Navy housing, mobilehome parks, etc.). Refer to Figure 4.3.4 for a list of water purveyors in Ventura County and Figure 4.3.5 for a map of major water wholesalers. It is estimated there are about 2,000 individual well owners who obtain their own water directly. Of the groundwater pumped in Ventura County, less than one third is delivered by a water system. Most of the groundwater pumping in Ventura County is done by individual well owners.

Figure 4.3.6 summarizes the Ventura County water districts that serve incorporated cities and unincorporated urban areas.

4.3.2.1 Agricultural Water

Ventura County obtains, as of April 1990, approximately 86% of the water required for agricultural uses from its groundwater. The remaining 14% is obtained from surface water (Lake Casitas and Santa Clara River), imported water and reclaimed water. The ratio of groundwater used relative to other sources is expected to decline somewhat by the year 2010 due to the decline in agricultural demand on groundwater by individual farmers, coupled with the likelihood that those water purveyors providing surface water to agricultural

users will continue to do so. The availability and use of imported water for agriculture will depend on its cost and the policy of purveying agencies.

Most local farmers obtain their water from their own wells. Their cost for water is based on energy use, annual maintenance costs, and in some areas extraction charges assessed by United WCD and the Fox Canyon Groundwater Management Agency.

The major geographic areas of agricultural water use are discussed below:

- Oxnard Plain: At present, Oxnard Plain agricultural users obtain the majority of their water from one of the five aquifers that underlie the Oxnard Plain. However, there is a County Ordinance restricting drilling any new Oxnard Aquifer zone wells which could aggravate seawater intrusion. Some surface water is also obtained from the Santa Clara River by the United WCD and distributed by the Pleasant Valley County Water District and other agricultural systems to individual irrigators.

  Over time, agricultural water demand on the Oxnard Plain is expected to decrease, due to the urbanization of prime agricultural land. In addition, availability of surface water supplies to meet agricultural demands is expected to increase, due to the construction of the Pumping Trough Pipeline Project and the improved Freeman Diversion Project (Figure 4.3.2). This delivery system is being built to deal with the County's severe seawater intrusion problem; it will deliver an additional 12,000 acre feet annually on the average, of Santa Clara River water and Lower Aquifer System groundwater, to farmers who are currently using groundwater from the intruded Upper Aquifer System.

  There is considerable potential for use of reclaimed water on the Oxnard Plain. The availability of such water for agriculture would dramatically decrease the amount of water needed from the County's groundwater system in the 1990's. The County has applied for a low-interest State loan of five million dollars to deliver reclaimed water from Thousand Oaks' Hill Canyon Waste Treatment Plant into the Pleasant Valley County Water District's distribution system (Figure 4.3.2).

- Santa Clara River Valley: The Santa Clara Valley's agricultural community depends primarily on groundwater for its water supply, although a small amount of surface water is diverted annually from the Piru Creek and Santa Clara River. It is anticipated there will be some loss of agricultural land in the area due to urbanization. By the year 2010 the major source of water for agriculture will continue to be groundwater. Overall the reduction in demand from agriculture on the groundwater systems will be offset by an increase in groundwater demand by urban users. In effect, total use of Santa Clara Valley's groundwater supply is expected to remain approximately constant for the remainder of the century.

- Conejo-Calleguas Basin: This area includes that portion of Ventura County served by the Calleguas Municipal Water District with the exception of the City of Oxnard. In

general, most of the agricultural land in this area lies in its western portions around the Las Posas Valley, the Santa Rosa Valley, Moorpark, and adjacent areas.

The Conejo-Calleguas area depends to a great extent on imported water for much of its agricultural uses.

Potential demand for additional reclamation, especially in the Las Posas area, is very high. The North Las Posas Basin is being overdrafted by 10,000 acre feet/year (1985). By 2000, this overdraft is expected to increase to 14,600 acre feet/year due to increasing agricultural pumping. Fox Canyon Groundwater Management studies indicate that this overdraft will increase to even a greater amount to 17,800 AF/year by the year 2010.

- Ojai Valley: Agricultural water users in the Ojai Valley obtain their water from two major sources, Lake Casitas and groundwater. One or two small systems depend on naturally occurring springs. In addition to the local Ojai Valley demand on Lake Casitas supplies, agricultural users along the north coast of Ventura County also obtain their water from Lake Casitas, as do several major oil companies who use Lake Casitas water to extract oil.

  The Casitas Municipal Water District provides water from Lake Casitas at both the wholesale and retail levels for urban and agricultural use. The Casitas MWD is near to supplying the "safe yield" of the Lake on a regular basis.

  Agricultural water demand is expected to decline as irrigated agricultural acreage is supplanted by urban development. However, the Casitas MWD estimates that up to approximately 3,000 additional acres could come under irrigation by the year 2000. Were this to occur, insufficient water would be available to meet demand. Casitas MWD, the City of Ventura and the United Water Conservation District are studying the feasibility of importing State Project Water, to which they hold an entitlement of 20,000 AF/year. Importation of water would enable Casitas MWD to meet the maximum expected demand.

- North Coast: The North Coast area of Ventura County has no significant local groundwater. Water is supplied by Casitas MWD. Most of the water delivered is used by farmers who have established avocado orchards in the area. The total water use in Zone 9 (Rincon) for fiscal year 1986-87 was 3,066 acre-feet, of which 2,678 acre-feet were used for agriculture. Casitas MWD has 514 residential and 12 industrial services in this area.

Demand from the agricultural sector is decreasing. Countywide demand for agricultural use is forecasted to decline by about 35,000 acre feet by the year 2010. As most of the County's agricultural demands are met by groundwater, and since overall surface supplies will actually increase due to the Pumping Trough Pipeline and Freeman Diversion projects, the decline in groundwater extraction for agriculture may be as high as 40,000 acre feet. To the extent reclaimed water is developed for irrigation use, this decrease will be even greater.

4.3.2.2 Municipal and Industrial Water Use

In 1985, Ventura County obtains slightly less than one-third of the water used for municipal and industrial (M & I) uses from its groundwater. The remaining two-thirds is obtained primarily from imported supplies (State Water Project) and from surface water (primarily Lake Casitas). This ratio is expected to continue for the remainder of the century, although the demand for groundwater is expected to increase more slowly than demands on surface and imported water sources.

Overall, M & I water use is expected to increase from a total of 128,000 AF in 1985 to 174,000 AF in the year 2000 to a total of about 197,000 AF for 2010.

Countywide, however, total extractions from the groundwater can be expected to decline only slightly, with the decreasing agricultural use being largely offset by increasing M & I use.

Forecasts of municipal and industrial water use is based on the following geographic areas:

- Oxnard Plain: On the Oxnard Plain, M & I users obtain most of their water from the Calleguas Municipal Water District (imported water) and the United Water Conservation District (groundwater from the El Rio pumping station). A relatively small amount of M & I water is obtained directly by water agencies and individuals operating their own wells. Although Port Hueneme and the City of Oxnard maintain wells drilled into the Oxnard Plain Aquifers, they are used only in emergency situations. Total M & I demand on the Oxnard Plain is expected to increase significantly.

  The City of Oxnard presently blends city water supplies at a ratio of two parts imported water to one part groundwater. This ratio is expected to continue indefinitely. Assuming this, Oxnard will require approximately 13,400 to 15,000 acre feet of groundwater by the year 2000. Other water systems on the Plain (which rely entirely upon groundwater) are expected to utilize approximately 12,600 to 14,500 acre feet of groundwater. The United Water Conservation District's Oxnard-Hueneme pipeline has a present design capacity of 16,500 acre feet. Assuming this capacity is not expanded, water systems on the Oxnard Plain can be expected to increase extractions from their own wells, because future demand from the M & I users will exceed the capacity of the pipeline.

  Although municipal and industrial demand on the Oxnard Plain groundwater supplies is increasing, it is anticipated that demands from the agricultural sector will decline. Forecasts indicate that increases in M & I demand on the groundwater will be offset by decreases in agricultural demand even though M & I use may require treatment or blending.

- Santa Clara Valley: The Santa Clara Valley communities of Fillmore, Santa Paula and Piru depend entirely on groundwater for their M & I supplies. Increases in M & I due to population growth are expected to be approximately offset by declines in agricultural use. This is because the urbanization of the Santa Clara Valley communities will take place almost entirely on agricultural land.

- City of Ventura: The City of Ventura deserves special discussion because of the complexity of its water supply network. The City actually obtains its water from five different sources: 1) Lake Casitas water via the Casitas Municipal Water District, 2) Ventura River surface and groundwater from the Foster Park Diversion (via a City pipeline), 3) wells in the Mound Basin, 4) Oxnard Plain Golf Course wells and 5) wells in the Santa Paula Basin.

  Anticipated population growth in the City of Ventura will require additional water supplies. As most of this population growth is anticipated to occur in the eastern portion of the City, water will not be available from Lake Casitas because these areas are beyond the service area of the Casitas Municipal Water District. Most of the increase in M & I demand in the City of Ventura will be met by increased groundwater extraction. The City expects to meet future demands after 1995 with imported State Project Water. The facilities to import this water are currently under study by the City of Ventura, United Water Conservation District, and Casitas Municipal Water District.

- Conejo-Calleguas Basin: This area represents that portion of Ventura County served by the Calleguas Municipal Water District (CMWD). This includes the communities of Moorpark, Oak Park, Thousand Oaks, Camarillo and Simi Valley (the City of Oxnard also receives Calleguas water; their water needs are discussed as part of the Oxnard Plain discussion). Virtually all M & I demand in this area will be met through imported water sources provided by the Metropolitan Water District (MWD) through facilities maintained by the Calleguas MWD. Any shortfalls would likely be met by some combination of increased groundwater extraction, expanded water conservation, and/or accelerated development of additional local supplies. The Metropolitan Water District indicates sufficient water exists to meet all domestic demands for the foreseeable future.

- Ojai Valley: Communities in the Ojai Valley depend on two primary sources for their M & I water: Lake Casitas and groundwater. In addition to local M & I users, the City of Ventura diverts about 6,000 acre feet annually at the Foster Park Diversion and transfers the water out of the valley for use within the City. The City of Ventura also utilizes a portion of the water provided by Lake Casitas.

  Demands on Ojai Valley resources will increase in the future as population increases. However, the magnitude of increase is less than in most other areas in the County. There will be relatively modest increases in demand from the Ojai Valley itself on both surface water and groundwater. The Casitas Municipal Water District may experience difficulties in meeting the combined M & I and agricultural demand by the early 1990s if additional acreage comes under irrigation. If irrigation is not extended to new acreage, sufficient water supplies will be available to the year 2010.

  The safe yield of the Ojai Valley's groundwater system is not known with certainty. Casitas Municipal Water District is now carrying out an Ojai Basin Groundwater Study (1988).

Information on municipal and industrial water use has been collected at various times by the County of Ventura. This data base was most recently updated in April, 1987. Per capita water use is estimated based on information from the 16 largest water purveyors in the County. Information has been assembled for each major urban area in the County; results appear in Figures 4.3.7 and 4.3.8. As can be seen, some areas of the County have experienced gradual increases in per capita water use over time, others decreased and some areas have fluctuated from year to year. Overall, current per capita water use is slightly higher in 1986 than in 1983.

The annual average per-capita water use rate countywide in 1986 was .209 acre feet (af) which is approximately 68,000 gallons per person per year. The daily per-capita rate was 186 gallons. The annual per-capita rate includes not only that water used by residents in their homes, but a proportionate share of water consumed by industries, businesses and public agencies which indirectly benefits those residents. The 1986 per-capita rate decreased by 0.004 AF from 1985 when the per-capita rate countywide was 0 .206 AF. Five cities (Camarillo, Fillmore, Oxnard, Port Hueneme and Ventura) had a decrease in per-capita consumption, while two areas in the County had an increase in per-capita usage (Thousand Oaks and Oak Park). The remaining cities' (Moorpark, Ojai, Santa Paula and Simi Valley) per-capita rates did not change.

4.3.2.3 Major Water Wholesale Districts

The three major water wholesalers which provide water to the various retail water purveyors throughout Ventura County are as follows:

1. The Casitas Municipal Water District provides for both wholesale and some retail sale of water from Lake Casitas, for delivery in the Ventura River Drainage Area, the North Coast, and the City of Ventura.

2. The United Water Conservation District is responsible for replenishing some groundwater systems and for some wholesale deliveries to Oxnard, Port Hueneme, and other smaller systems on the Oxnard Plain. Lake Piru is United's reservoir for water which is later released; replenishing underground aquifers. United also operates the Freeman Diversion to direct Santa Clara River water to spreading grounds, to replenish the Oxnard Aquifer.

3. Calleguas Municipal Water District is responsible for providing imported water to the southeastern portions of the County and the City of Oxnard.

Total water demand projections for users within three major water wholesalers have been prepared on the basis of Countywide population forecast data adopted by the County Board of Supervisors on May 5, 1985 (see Land Use Appendix) and the most recent projections of irrigated agriculture. Refer to Figure 4.3.9 Casitas Municipal Water District (Table), Figure 4.3.10 United Water Conservation District (Table), and Figure 4.3.11 Calleguas Municipal Water District (Table).

4.3.3 CONCLUSIONS

There are three major approaches towards meeting the future water needs of Ventura County. These include:

a. Importation of State Water Project Water into Ventura County.

b. Development of additional water reclamation.

c. Water conservation programs.

Regional coordination is another approach in meeting future water needs for Ventura County.

4.3.3.1 Importation of State Water Project (SWP) Water

According to a June 1987 Feasibility Report prepared by James M. Montgomery, Consulting Engineers, Inc., their final report, titled, "Feasibility of Importing State Project Water into Ventura County," presents the results of their engineering, economic and environmental evaluation of alternative approaches for meeting the future water needs of the County using State Project water.

Four principle alternatives were investigated in their study. These alternatives were:

1. Importation of the 20,000 acre-ft/yr State Water Project (SWP) entitlement from Castaic Lake via a pipeline through the Santa Clara River Valley.

2. Importation of SWP water from Pyramid Lake through Lake Piru with local runoff from Piru Creek and supplemental local water from Oat Mountain Diversion on Sespe Creek.

3. Importation of SWP water from Pyramid Lake through Lake Piru with flow in Piru Creek channel to Piru Spreading Grounds and pipeline facilities from Piru Spreading Grounds with local water from Oat Mountain Diversion on Sespe Creek.

4. Investigation of providing SWP water from Sespe Creek as a local project under the SWP consisting of one or more dams on Sespe Creek.

A final evaluation of each alternative was conducted on an economic and environmental basis in conjunction with other important criteria.

Each of the alternatives provides sufficient water to meet the projected needs within the study period. On the basis of the economic and environmental results and other criteria used in the final evaluation (effectiveness, public acceptance, compatibility, constructability, reliability, and flexibility), Alternative 3 is the most favorable. In terms of effectiveness, flexibility, and compatibility with existing plans and systems, it is ranked the highest. For the other criteria, it was ranked no lower than second. It has the lowest unit cost and it has no major adverse environmental impacts.

The recommended project is Alternative 3: Importation of SWP water from Pyramid Lake through Lake Piru with flow in Piru Creek channel to Piru Spreading Grounds and pipeline facilities from Piru Spreading Grounds with local water from Oat Mountain Diversion on Sespe Creek and with individual agency treatment plants. The water would then flow in the creek channel to Piru Spreading Grounds. From this point, a pipeline system would convey the water to Piru, Fillmore, Santa Paula and Ventura where individual agency treatment

plants would be constructed. A turnout would be provided at Todd Barranca for groundwater recharge at Saticoy Spreading Grounds (Figure 4.3.2).

4.3.3.2 Wastewater Reclamation

From all the water reclamation alternatives developed and studied by the County, two were recommended for further consideration. Both plans would supply reclaimed water to overdrafted groundwater basins within the Fox Canyon Groundwater Management Agency (GMA).

One of the plans (SM-AGR-4) could provide reclaimed water for the Las Posas area within the Berylwood Heights Mutual Water Company and Zone Mutual Water Company service areas. Within the next 15 years between 5,330 (1986) and 6,630 (2000) AF/yr of effluent from the Simi Valley Treatment Plant could be used for irrigation in these two service areas.

The other plan (H-AGR-4) could initially deliver about 10,760 AF/yr (1990) and ultimately 12,920 AF/yr (2000) of reclaimed water from the Thousand Oaks/Hill Canyon Treatment Plant to the Oxnard Plain. Reclaimed water would be pumped and conveyed to the Pleasant Valley Reservoir. From the reservoir it could be distributed through the existing Pleasant Valley County Water District (PVCWD) system or the United Water Conservation District's (UWCD) recently completed (but presently non-operational) Pumping Trough Pipeline (PTP) system. With either system, PVCWD or UWCD, the reclaimed water would be used for irrigation.

The County could assume overall responsibility for delivering reclaimed water. However, financial feasibility will depend on issuance of state grant or low interest rate loan.

4.3.3.3 Water Conservation

The County prepared a "Water Conservation Management Plan" as part of the 208 and Countywide Planning process, and as a condition of the State Water Resources Control Board grant for the PTP project. As part of this plan, agricultural and urban water conservation programs have been developed. Local agencies, cities and water purveyors are voluntarily responsible for implementing these programs. A "Water Conservation Coordinator" is employed within the County Planning Department. The position is being funded jointly by the County, Casitas Municipal Water District, Calleguas Municipal Water District, and United Water Conservation District.

Various agricultural and urban water conservation measures have been selected for implementation. They are summarized as follows:

AGRICULTURAL WATER CONSERVATION MEASURES

Educational Programs/Information

Expand educational services
Workshops and field tours
Water system evaluation service
Pump efficiency testing program
Centralized irrigation management service
Evaporation pan program
Roundtable meetings
Water Resources

Forum (formerly known as the Water Resources Planning Committee)
Field Demonstrations

Other Programs

Tailwater recovery systems
Meter availability
Flexible irrigation scheduling
Other research

URBAN WATER CONSERVATION MEASURES

Education and Public Relations

In-school education programs
Landscape and maintenance education program
Water usage on bills
Water conservation literature
Speaker's bureau
Water Resources Forum

System Maintenance

Leak detection program
Systemwide water audits
Meter calibration and maintenance
Customer leak detection program

Regulation/Policies

Landscape review guidelines
Standard development condition
Emergency ordinance
Increasing block rate structure
Individual meters

Research

New plant and irrigation tests
Information and new research

4.3.3.4 Regional Coordination

Presently, there may be insufficient comprehensive Countywide planning for water resources. In some cases, water agencies have conflicting policies and goals; many water problems remain unresolved. There is a need to correlate data, develop priorities and establish new policies to meet future water needs of the County. Formation of a Countywide Water Agency has been suggested as a way to help resolve these other water problems.

However, one regional effort was implemented in December 1990, with the completion of the long awaited Freeman Diversion Structure (dam) in the Santa Clara River. The dam is used to divert seasonal water from the river to United Water Conservation District's aquifer recharge percolation ponds located in the El Rio area.

REFERENCES

Ventura County Annual Report: Water Conservation Management Plan, (December 1985); for 1985-86, (July 1980); for 1986-87 (July 1987); and for 1988-89 (August 1989).

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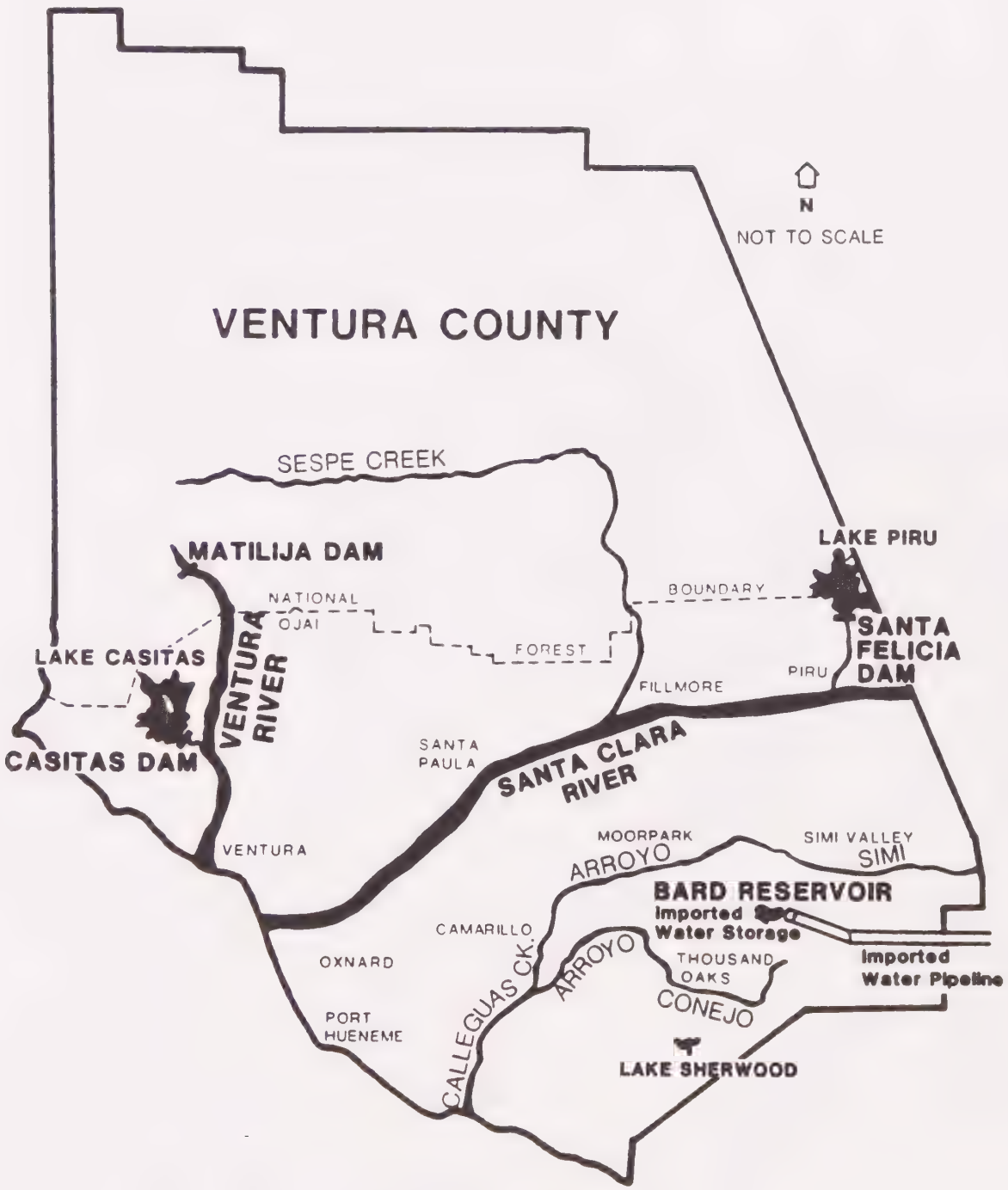
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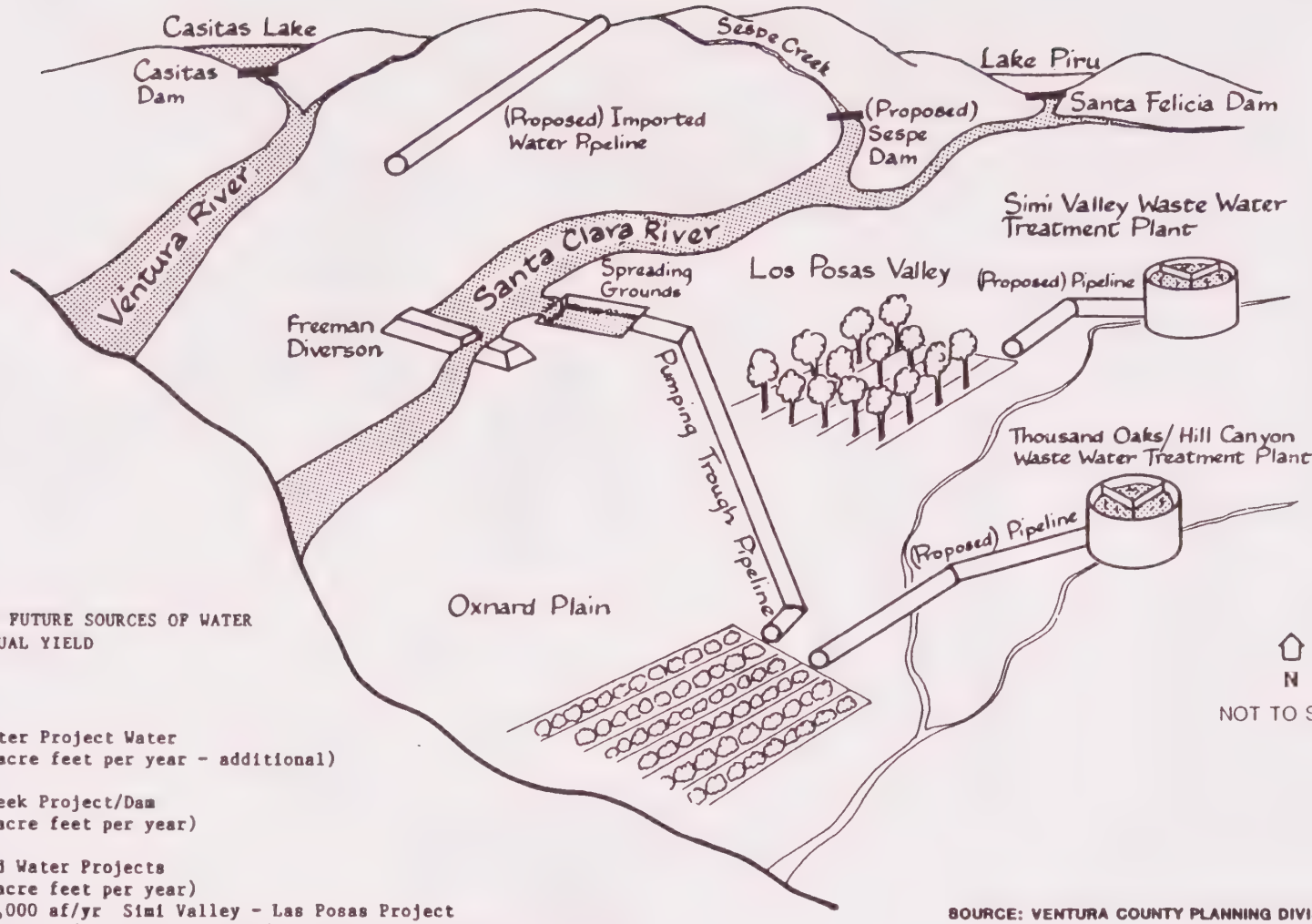
Dick Barnett, Casitas Municipal Water District
Ron Morgan, United Water Conservation District
John Munday, City of Ventura Water Department
Rick Farnsworth, County of Ventura Water Resources Department
John Turner, County of Ventura Water Resources Department
Jane Haggerty, Ventura County Planning Division



VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX FIGURE 4.3.1

MAJOR SURFACE WATER SOURCES

SOURCE: VENTURA COUNTY PLANNING DIVISION
DATE: OCTOBER 1986



PROPOSED FUTURE SOURCES OF WATER
WITH ANNUAL YIELD

State Water Project Water
(20,000 acre feet per year - additional)

Sespe Creek Project/Dam
(24,000 acre feet per year)

Reclaimed Water Projects
(18,000 acre feet per year)
6,000 af/yr Simi Valley - Las Posas Project
12,000 af/yr Thousand Oaks/Hill Canyon - Oxnard Plain Project

SOURCE: VENTURA COUNTY PLANNING DIVISION

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX FIGURE 4.3.2

water supply projects

R.12/10/91

FIGURE 4.3.3

VENTURA COUNTY WATER RESOURCES
1985 FACTS AND FIGURES

COUNTYWIDE WATER USE BY SOURCE
(in acre feet per year)

User	Groundwater	Surface Water	Imported Water	TOTAL
Municipal/Industrial (M&I)	36,000	14,000	80,000	130,000
Agricultural	237,000	30,000	10,000	277,000
	273,000	44,000	90,000	407,000

PERCENTAGE OF WATER USED BY TYPE		PERCENTAGE OF WATER USED BY SOURCE	
AGRICULTURAL USE	68%	SURFACE WATER	11%
MUNICIPAL/INDUSTRIAL USE	32%	GROUNDWATER	67%
		IMPORTED WATER	22%

RECLAIMED WATER USE - CURRENT	WATER PRICES ($ per acre foot)	
1,500 acre feet per year	Private wells	$40 - $120
	Agricultural rate*	$35 - $300
	M&I rate*	$180 - $410
	* = retail rate	

Note: Some figures included on these pages are actual usages derived from water use survey results (such as M&I use). Other numbers (such as total agricultural use and total groundwater use), are estimates based on number of irrigated acres of farmland, estimated average consumptive use rates for crops and other information. This is due to the fact that many groundwater wells in the county do not have a water meter measuring *actual* use.

COUNTYWIDE POPULATION = 620,000

AVERAGE PER CAPITA WATER USAGE = 0.22 acre feet/person/year, or 71,720 gallons/yr., or 196 gallons/day (includes residential, commercial and industrial use)

PERCENTAGE OF PEOPLE IN COUNTY USING IMPORTED WATER (M&I users) = 62%

PERCENTAGE OF AGRICULTURAL WATER USE COMING FROM GROUNDWATER = 86%

Reference Documents:

Ventura County Water Conservation Management Plan
Ventura County 208 - Water Quality Management Plan
Ventura County Urban Water Management Plan
Water Use Survey Conducted of Local Water Agencies
United Water Conservation District Annual Report on Groundwater Conditions

FIGURE 4.3.4
WATER PURVEYORS IN VENTURA COUNTY

CITIES

Camarillo
Fillmore
Oxnard
Port Hueneme
San Buenaventura
Thousand Oaks

SPECIAL DISTRICTS

Calleguas Municipal Water District
Camrosa County Water District
Casitas Municipal Water District
Channel Islands Beach Community Services District
Colonia Municipal Water District (paper)
Del Norte Municipal Water District (paper)
Hidden Valley Municipal Water District (paper)
Meiners Oaks County Water District
Ocean View Municipal Water District (paper)
Pleasant Valley County Water District
Pleasant Valley Municipal Water District (paper)
Russell Valley Municipal Water District (paper)
San Antonio Water Conservation District
United Water Conservation District
Ventura County Waterworks District No. 1 - Moorpark
Ventura County Waterworks District No. 8 - Simi Valley
Ventura County Waterworks District No. 16 - Piru
Ventura County Waterworks District No. 17 - Bell Canyon
Ventura County Waterworks District No. 19 - Las Posas Valley
Ventura River County Water District

OTHER PUBLIC WATER PURVEYORS

Camarillo Utilities Enterprise (Airport)
Camarillo State Hospital
U.S. Naval Air Station, Point Mugu
Sheriff's Honor Farm

PUC-REGULATED PRIVATE WATER PURVEYORS

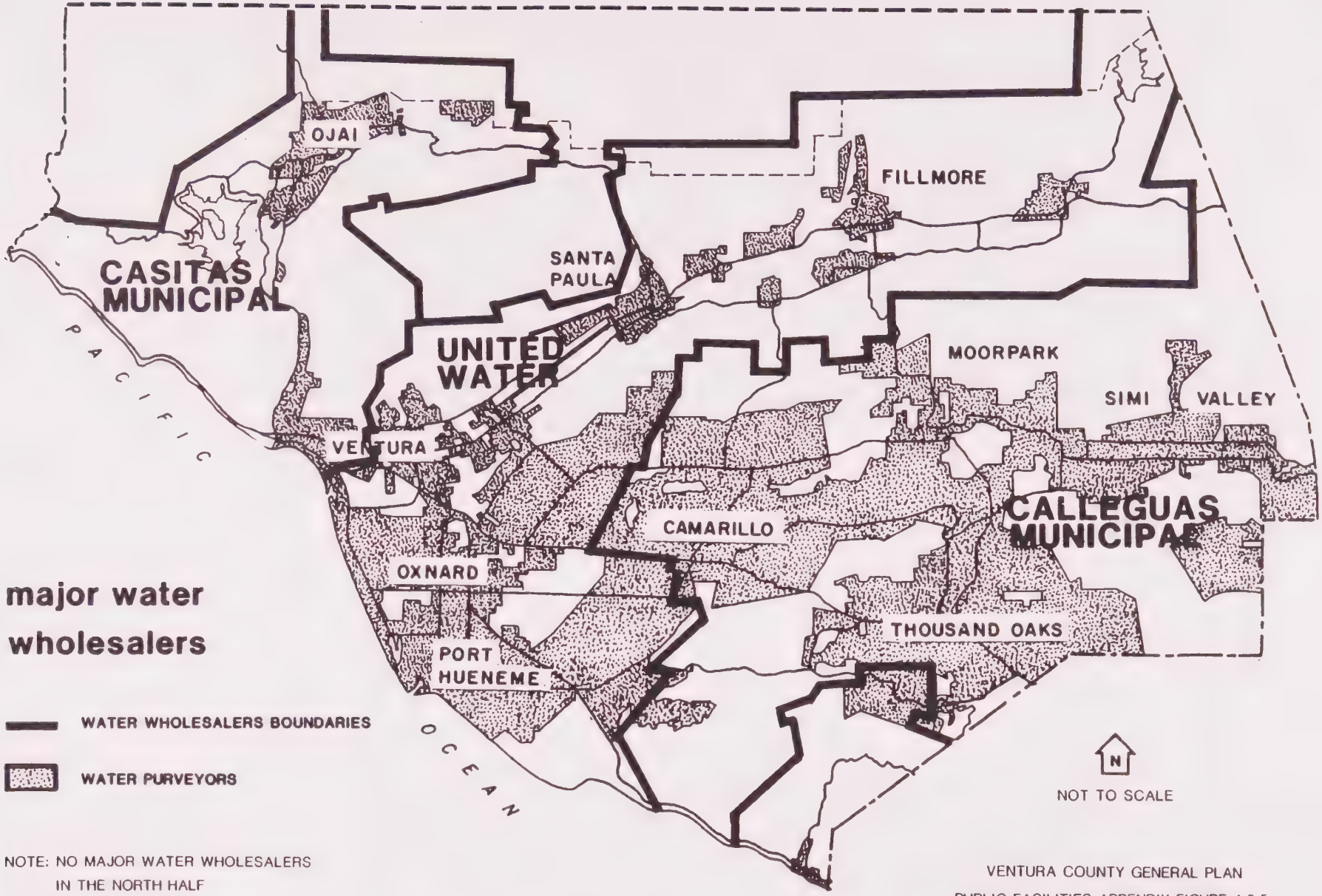
California American Water Company (Village District)
California Water Service Company (Westlake Village)
Metropolitan Water Company (Oak Park)
Rio Plaza Water Company
Santa Paula Waterworks, Incorporated
Southern California Water Company (Ojai)
Southern California Water Company (Simi Valley)
Warring Water Company (Piru)

FIGURE 4.3.4 (con't)

MUTUAL WATER COMPANIES AND OTHER PRIVATE WATER COMPANIES

Academy MWC
Aliso MWC
Alta MWC
Arroyo Las Posas
Arroyo Mobile Home Park
Berylwood Heights MWC
Bixby Balcom Water Association, Inc.
Brownstone MWC
Calcara Conejo Trailer Park
Casitas MWC
Cloverdale MWC
Community MWC
Crestview MWC
Cypress MWC
Damasos Leonos
Del Norte MWC
Dempsey Road MWC
Elkins Ranch Company
El Rio MWC
Epworth MWC
Evergreen Trailer Park
Fairview Ranches MWC
Farmers Irrigation Company
Fillmore Irrigation Company
Fillmore West Trailer Park
Fortress MWC
Fuller Falls MWC
Garden Acres MWC
Glenn View Mobile Home Park
Goodenough MWC
Gridley Road Walter Group
Hermitage MWC
Lake Sherwood MWC
La Loma Ranch MWC
Las Lomas Water System
Limoneira Ranch
Mesa Water Co.
Middle Road MWC
Montalvo MWC
Navalaire Mobile Home Park
New Camp Bartlett
North Drown Water Association
Nyeland Acres MWC
Old Creek Road MWC
Oviatt Water Association
Oxnard MWC
Oxnard Lemon MWC
Plaza Mobile Home Park
Pleasant Valley MWC
Rancho del Cielo
Rancho Matilija MWC
Raytheon Company
Rincon Water and Road Works, Inc.
Rio Manor MWC
Rissman MWC
Royal Duke Mobile Estates
San Cayetano MWC
Santa Rosa MWC
Saviers Road MWC
Senior Canyon MWC
Sherwin Acres MWC
Siete Robles MWC
Silver Wheel Ranch Mobile Home Park
Sisar MWC
Solano Verde MWC
South Mountain MWC
Southside Improvement Company
Strickland Acres MWC
Sulphur Mountain Pipeline Association
Teague McKevitt Ranch
Teal Club MWC
Thermal Belt MWC
Thermic MWC
Thomas Aquinas College
Tico MWC
Timber Canyon MWC
Tobak Ranch MWC
Tradewinds Mobile Home Park
Tres Condados Girl Scout Council
Valley Trailer Villa
Villanova Road Water Well
Vineyard Avenue Acres MWC
Vineyard Avenue Estates MWC
Vineyard MWC
White Stallion Ranch MWC
Yerba Buena Water Company
Zone MWC

Source: Draft, Local Agency Formation Commission Water Purveyors Study, October 1987



NOTE: NO MAJOR WATER WHOLESALERS IN THE NORTH HALF

SOURCE: VENTURA COUNTY PLANNING DIVISION 1986

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX FIGURE 4.3.5

FIGURE 4.3.6

MAJOR MUNICIPAL AND INDUSTRIAL RETAIL WATER PURVEYORS FOR VENTURA COUNTY CITIES AND UNINCORPORATED AREAS

SUPPLIERS	CITY SERVED	SUPPLIERS	CITY SERVED	SUPPLIERS	UNINCORPORATED AREA SERVED
California American Water Company	Thousand Oaks (part)	City of Port Hueneme Water Department	Port Hueneme	Casitas Municipal Water District*	North Coast and Ojai Valley
California Water Service Company	Thousand Oaks (part)	City of San Buenaventura Water Department	San Buenaventura	Channel Islands Beach Community Services	Hollywood by the Sea, Silver Strand and Channel Islands Harbor Area of Oxnard
Camarillo City Water Department	Camarillo	City of Thousand Oaks Water Department	Thousand Oaks (part)	Meiners Oaks County Water District	Meiners Oaks (part)
Camrosa County Water District	Camarillo	County Waterworks District #1	Moorpark	Metropolitan Water Company	Oak Park
City of Fillmore Water Department	Fillmore	County Waterworks District #8	Simi Valley (part)	Ventura River County Water District	Oak View and Oaks Meiners (part)
City of Oxnard Public Works Department	Oxnard	Santa Paula Waterworks District	Santa Paula	Warring Water Service	Piru
		Southern California Water Company	Ojai and Simi Valley (part)		

SOURCE: Ventura County Resource Management Agency, Planning Division, September 1987

*Also a wholesale supplier to various minor purveyors within the same area.

FIGURE 4.3.7

VENTURA COUNTY
1986 WATER SURVEY RESULTS

City	Population*	Municipal/Industrial Water Use (acre feet)	Historic Per Capita Use (acre feet per year)			
			1983	1984	1985	1986
Camarillo[1]	47,452	10,804	.20	.25	.25	.23
Fillmore	10,955	2,193	.18	.22	.21	.20
Moorpark	17,533	4,923	.30	.26	.28	.28
Oak Park	6,853	1,470	.18	.24	.19	.21
Ojai	7,714	1,670	.17	.21	.22	.22
Oxnard	123,990	17,828	.15	.16	.15	.14
Port Hueneme	20,324	3,377	.18	.19	.18	.17
Santa Paula	23,451	4,217	.17	.20	.18	.18
Simi Valley	94,316	19,405	.18	.22	.21	.21
Thousand Oaks[2]	102,381	29,095	.24	.29	.27	.28
Ventura	87,461	16,568	.20	.24	.21	.19
TOTALS**	**542,430**	**111,550**	**.19**	**.22**	**.21**	**.21**

* Population figures developed by State Department of Finance
** This total does not include non-growth areas outside cities

[1] Camarillo population and water use includes portions outside the city limits which are served by Camrosa County Water District.

[2] Thousand Oaks population and water use includes Newbury Park, which is served by the California American Water Company.

SOURCE: Ventura County Planning Division Water Use Survey, conducted April, 1987.

NOTE: One acre foot is equal to 325,850 gallons.

FIGURE 4.3.8 VENTURA COUNTY 1986 URBAN WATER SURVEY

CITY	POPULATION	SUPPLY BY SOURCE FOR ALL WATER USES (Including Agricultural Uses Within Cities)					MUNICIPAL/INDUSTRIAL (M/I) USE ONLY Acre Feet/Year			
		WATER PURVEYOR	GROUNDWATER	SURFACE WATER	IMPORTED WATER	TOTAL	COM./IND.	RESIDENTIAL	OTHER (Parks, etc.)	M & I TOTAL
CAMARILLO	47,452	City of Camarillo	3,518	0	4,091	7,609	1,533	4,599	N.A.	6,132
		Camrosa CWD	2,888	0	6,761	9,649	N.A.	N.A.	N.A.	4,672
FILLMORE	10,955	City of Fillmore	2,299	0	0	2,299	325	1,439	429	2,193
MOORPARK	17,533	Ventura Co. WW Dist.#1	2,707	0	7,145	9,852	500	4,423	N.A.	4,923
OAK PARK	6,853	Metropolitan Water Co.	0	0	1,566	1,566	2	891	577	1,470
OJAI	7,714	Southern California Water Co.	1,663	401	0	2,064	242	1,340	88	1,670
OXNARD	123,990	City of Oxnard	6,454	0	13,873	20,327	17,732	17,828	96	N.A.
PORT HUENEME	20,324	City of Port Hueneme	3,377	0	0	3,377	N.A.	N.A.	N.A.	3,377
SANTA PAULA	23,451	Santa Paula Waterworks	5,426	1,395	0	6,821	1,408	2,780	29	4,217
SIMI VALLEY	94,316	Southern California Water Co.	0	0	8,632	8,632	99	6,600	583	7,282
		City of Simi Valley	357	0	14,838	15,195	1,624	8,747	1,752	12,123
THOUSAND OAKS	102,381	City of Thousand Oaks	100	0	9,935	10,035	1,090	7,451	1,056	9,597
		California Water Service	0	0	6,357	6,357	N.A.	N.A.	N.A.	5,829
		Cal-American Water Co.	0	0	13,778	13,778	3,725	8,930	1,014	13,669
VENTURA	87,461	City of Ventura	7,755	14,492	0	22,247	1,045	12,342	3,181	6,568

*Does not include unaccounted for water (leaks, unmetered uses, etc.)
N.A. = Breakdown not available
SOURCE: Ventura County Planning Division Water Use Survey, conducted April, 1987

FIGURE 4.3.9a

WATER DEMAND PROJECTIONS WITHIN CASITAS MWD
(ACRE-FEET PER YEAR)

Year	Population[1]	M & I Demand[2]	Ag. Acres[3]	Maximum Ag. Acres[4]	Ag. Demand[5]	Maximum Ag. Demand[5]	Oil Co. Demand[6]	Unaccounted[7] Water	Total Demand	Maximum Total Demand
1985	52,093	11,460	5,040	6,500	10,080	13,000	3,480	1,020	26,040	28,960
1990	54,678	12,029	5,010	7,050	10,020	14,100	4,500	1,160	27,709	31,789
1995	57,348	12,617	4,980	7,800	9,960	15,600	4,500	1,180	28,257	33,897
2000	59,759	13,147	4,950	8,160	9,900	16,320	4,500	1,190	28,737	35,157
2005	62,162	13,676	4,585	8,160	9,170	16,320	4,500	1,200	28,546	35,696
2010	64,328	14,152	4,220	8,160	8,440	16,320	4,500	1,210	28,302	36,182

[1] Based on Countywide population forecast, adopted by Board of Supervisors 5/7/85

[2] Municipal and Industrial demand, based on population forecast times per capita M & I use factor (0.22 acre-feet per person per year) taken from the Ventura County Water Conservation Management Plan.

[3] Source of data is the Ventura County General Plan Draft Land Use Appendix.

[4] Source: Report on Feasibility of Importing Water into Ventura County (1987) Table 2-4. "The 'maximum' values are based on firm estimates from developments in progress or planned. Those projects that will be completed before 1990 are added into acreage for that year. The remainder of the firm planned agricultural acreage is added to the 1995 and subsequent years' acreage." Compiled by Casitas MWD.

[5] Based on water use factor of 2.0 acre-feet per acre per year.

[6] Source: Report on Feasibility of Importing Water into Ventura County (1987). "Actual value used for 1985 but the remaining years represent maximum potential demand for the oil companies."

[7] Source: Report on Feasibility of Importing Water into Ventura County (1987) "Percentage of unaccounted water is maintained consistently throughout the Study Period."

All figures in this table are rough estimates. The Casitas MWD is presently (11/87) preparing a supply/demand study which will more precisely address this issue.

FIGURE 4.3.9b

WATER SUPPLY PROJECTIONS WITHIN CASITAS MWD
(ACRE-FEET PER YEAR)

Year	Groundwater[1]	Lake Casitas[1] (city portion)	Lake Casitas[1] (remainder)	Imported (State) Water	Recycled[2] Water	Total Supply
1985	10,390	9,100	11,250	0	0	30,740
1990	10,000	9,800	10,550	0	1,300	31,650
1995	10,000	10,000	10,350	0	1,300	31,650
2000	10,000	10,000	10,350	0	1,600	31,950
2005	10,000	10,000	10,350	0	1,600	31,950
2010	10,000	10,000	10,350	0	1,600	31,950

[1] Source: Report on Feasibility of Importing State Project Water into Ventura County (1987), Table 3-1 All of the groundwater is pumped by retail purveyors and individuals other than Casitas MWD.

[2] Source: 1980 208 Water Quality Plan Appendix IV, Table 9, p. 23.
Discussions with Casitas (11/87) indicate that Casitas does not presently plan to construct reclamation facilities.

FIGURE 4.3.10a

WATER DEMAND PROJECTIONS WITHIN UNITED WCD
(ACRE-FEET PER YEAR)

			Ag. Acres[3]				
Year	Population[1]	M & I Demand[2]	Santa Clara	Coastal Plain	Ag Demand[4]	Unaccounted[5] Water	Total Demand
1985	264,374	50,231	32,190	32,305	176,754	3,310	230,295
1990	290,346	55,166	32,065	31,435	173,782	3,760	232,708
1995	318,254	60,468	31,935	30,560	170,782	4,060	235,310
2000	352,240	66,926	31,810	29,695	167,826	4,530	239,282
2005	379,365	72,079	30,365	28,610	161,013	4,810	237,902
2010	408,556	77,626	28,915	27,525	154,187	5,090	236,903

[1] Based on Countywide population forecasts, adopted by Board of Supervisors 5/7/85.

[2] Municipal and industrial demand, based on population forecast times per capita M & I use factor (0.19 acre-feet per person per year).
Source: Ventura County Planning Division.

[3] Source of data for Ag Acres is the Draft Land Use Appendix and Irrigated Farmland data from the Important Farmlands Inventory.

[4] Based on water use factors of 2.41 acre-feet per acre per year for Santa Clara Valley and 3.07 acre-feet per acre per year for Coastal Plain.

[5] Values are M & I losses only based on reported data in the Urban Water Management Plans for water agencies within the United District. The percentage of unaccounted water is maintained consistently throughout the study period.

FIGURE 4.3.10b

WATER SUPPLY PROJECTIONS WITHIN UNITED WCD
(ACRE-FEET PER YEAR)

Year	Santa Clara Valley			Coastal Plain			(Feasibility) Total Supply	(County)* Total Supply
	Surface[1]	Ground (Feasibility)[2]	(County)* Ground	Surface[3]	Ground[4]	Imported[6]		
1985	12,950	69,750	69,750	8,440	123,500	14,000	228,640	228,640
1990	12,000	36,700	69,750	25,950	113,400	21,840	209,890	242,940
1995	12,000	36,700	69,750	26,020	113,800	22,950	211,470	244,520
2000	12,000	36,700	69,750	26,100	113,600	25,550	213,950	247,000
2005	12,000	36,700	69,750	26,150	113,300	27,460	215,610	248,660
2010	12,000	36,700	69,750	26,230	113,000	29,370	217,300	250,350

Source: Report on Feasibility of Importing State Project Water into Ventura County (1987), Table 33.

[1] Surface water diversions were over 12,000 acre feet per year ending July 1, 1985 according to United's Annual Report on Groundwater Conditions.

[2] Groundwater supplies are based on safe yield estimates from available references except 1985 which is actual use.

[3] Coastal Plain surface water includes the Pleasant Valley pipeline, the Oxnard - Port Hueneme pipeline (yield from surface water although extracted from groundwater), the Pumping Trough Pipeline (50 percent of maximum supply assumed to be surface water), and reclaimed water from the City.

[4] Values based on GMA approximated restrictions (including overdraft) on Coastal Plain basins Task 86-3) plus amounts from the Mound Basin in the City except 1985 which is from actual use data from United's Annual Report.

[5] Includes supplies imported by the City from the Ventura River Foster Park facilities and those imported by Oxnard from Calleguas assuming supply of two-thirds of Oxnard's demand by Calleguas except 1985 which is actual use.

(County)* The County Public Works Agency, Groundwater Section does not agree with the consultant's method of computing future groundwater extractions for the Santa Clara River Valley, and believes a more accurate projection is one based on the actual groundwater use in 1985 or later. The County's higher projected groundwater use also increases the total supply above that computed by the consultant.

FIGURE 4.3.11a

WATER DEMAND PROJECTIONS WITHIN CALLEGUAS MWD*
(ACRE-FEET PER YEAR)

Year	Population[1]	M & I Demand[2]	Ag. Acres[3]	Ag. Demand[4]	Total Demand
1985	266,494	66,624	26,630	53,260	119,884
1990	312,709	78,177	25,080	50,160	128,337
1995	346,846	86,711	23,540	47,080	133,791
2000	374,269	93,567	21,980	43,960	137,527
2005	398,698	99,675	21,780	43,560	143,235
2010	419,284	104,821	21,580	43,160	147,981

[1] Based on Countywide population forecast, adopted by County Board of Supervisors 5/7/85.

[2] Municipal and industrial demand, based on population forecast times per capita M & I use factor (0.25 acre-feet per person per year compiled by PWA 8/87 from average of 1985 Water Use Survey).

[3] Source of Ag Acres is the Draft Land Use Appendix and Irrigated Farmland from Important Farmlands Inventory.

[4] Based on Agricultural Water Demand Factor (2.0 AF/acre/year from County of Ventura Water Conservation Management Plan (1983).

*Excluding the City of Oxnard

FIGURE 4.3.11b

WATER SUPPLY PROJECTIONS WITHIN CALLEGUAS MWD
(ACRE-FEET PER YEAR)

Year	Groundwater[1]	Surface[2] Water	Imported[3]	Recycled[4] Water	Total Supply
1985	79,750	0	190,000	1,725	271,475
1990	79,750	900	190,000	1,725	272,375
1995	79,750	900	190,000	23,015	293,665
2000	79,750	900	190,000	26,475	297,125
2005	79,750	900	190,000	26,475	297,125
2010	79,750	900	190,000	26,475	297,125

[1] The 79,750 acre feet of groundwater is based on estimate of 273,000 AF/Y Countywide, less the groundwater supply projections for Casitas and United. All of this water is pumped by individuals and agencies other than Calleguas MWD.

[2] Source: 1980 208 Plan Appendix IV, Table 9, p. 26.

[3] Ibid.

[4] Assumes continuation of current reclamation at Camarillo and Camrosa wastewater Treatment Plants and completion of reclamation facilities at the Hill Canyon and Simi Wastewater Plants by 1995.

4.4 WASTE TREATMENT AND DISPOSAL FACILITIES

Waste treatment/disposal facilities include the following types of facilities:

- **On-Site Septic Systems (Individual Sewage Disposal Systems)**
- **Sewage Treatment Facilities** (excluding septic systems)
- **Solid Waste Disposal Sites**
- **Off-Site Waste Treatment Facilities** (excluding sewage)

Each type of waste facility will be described according to type of waste handled and location of facility in the County. The Waste Facilities Map (Figure 4.4.1) shows the location of sewage treatment facilities and solid waste disposal sites.

4.4.1 ON-SITE SEPTIC SYSTEMS (INDIVIDUAL SEWAGE DISPOSAL SYSTEMS)

On-site septic systems, also referred to as individual sewage disposal systems (ISDS), are those liquid waste systems which dispose of sewage generated by individual residences and businesses in unsewered areas. A conventional ISDS usually includes a septic tank and either a seepage pit or leach lines. Mound systems and subsurface sand filtration systems are two alternative ISDS which may be approved for use in areas where there are shallow soils over bedrock, high groundwater (either seasonal or permanent), or fractured bedrock. They are restricted for use only under specific conditions and guidelines in those areas of the County where community sewer systems are not available and on-site conditions preclude the use of conventional septic tank/soil absorption systems. Only domestic (i.e., human waste from everyday living activities) can be discharged into a septic system.

The siting criteria used to determine whether a lot is suitable for an ISDS include the lot's size, the tested soil absorption rate, the depth to groundwater, the setback from surface waters and wells, and the topography and geology of the lot. Refer to Figure 4.4.2 for a map indicating areas in the County with severe septic system limitation.

These siting criteria are based on the Uniform Plumbing Code as incorporated into the Ventura County Building Code and further detailed in the Ventura County Environmental Health Division ISDS Technical Information Manual.

Mound and subsurface filtration systems must be designed by a Registered Civil Engineer. The County requires that such systems be officially documented on the deed of the property on which they are installed plus the property owner proposing an alternate system must grant an easement to County Service Area (CSA) 32. The property must be in CSA 32 or another public agency capable of providing maintenance or monitoring services. The design engineer must verify in writing that the system was installed as designed.

As of 1987, it is estimated there are in excess of 15,000 ISDS located Countywide.

County Service Area No. 32 was formed to ensure that privately-owned ISDS are properly maintained. CSA 32 is administered through the County Environmental Health Division.

4.4.2 SEWAGE TREATMENT FACILITIES

Sewage treatment facilities collect water used for domestic, commercial and industrial purposes, treat it to remove organic and inorganic waste materials, and discharge the treated effluent to the environment. Operation of these facilities is regulated by local, State and Federal agencies to protect the County's surface and groundwater from biological and chemical pollutants.

The vast majority of the County's population is served by one of the 16 sewage treatment plants, also commonly referred to as wastewater treatment facilities. The Ventura Regional Sanitation District operates seven of these; one is operated by the County and seven by local City or special districts, while the Thomas Aquinas College operates its own plant. A map showing the location of the treatment plants in Ventura County is part of the Waste Facilities Map (see Figure 4.4.1).

In addition, a number of County residents within the Triunfo County Sanitation District (Southeast Ventura County) are served (by a reciprocal agreement with the Las Virgenes Sanitation District) by the Tapia Wastewater Treatment Plant in Los Angeles County.

A survey was conducted in April 1983 requesting information regarding sewage treatment plant capacity, sludge quantities, grit and screenings quantities, methods of sludge dewatering and disposal, and solids disposal problems. The survey was answered by all of the 16 public operated sewage treatment plants except the privately operated Thomas Aquinas College facility. Information relating to other plants, operated by the military or private industry, was not gathered.

Approximately 43,000 wet tons of sludge were generated in 1984 by the 15 plants surveyed for this analysis. Eventually, all of this sludge is either disposed as a soil amendment or is transported to a sanitary landfill. An estimated 99.98% of all Ventura County sludges that are landfilled are disposed of at the Simi Valley Landfill. The remaining 0.02% (by weight) are sludges with greater than 50% solids content which are disposed of at the Toland Road Landfill, with fractional amounts going to the Coastal Landfill.

Brief descriptions of each sewage treatment plant are included in the following paragraphs:

4.4.2.1 Existing and Potential Sewage Treatment Plants

(1) Camarillo Sanitary District Water Reclamation Plant: The plant is located at 150 Howard Road, Camarillo, near the Conejo Creek in southeast Ventura County, and is operated by the Camarillo Sanitary District. Design capacity of this secondary treatment plant is 6.0 million gallons per day (mgd). Sludge is anaerobically digested and dewatered on drying beds. Dried sludge is disposed by spreading on agricultural lands, specifically a local sod farm. Grit and screenings are hauled to the Oxnard Coastal Sanitary Landfill. The treatment plant presently generates approximately 1,200 tons of sludge and 90 tons of grit/screenings annually as of 1985. There are no current expansion plans for this plant.

(2) Camrosa Wastewater Treatment Plant: The plant is located at 1878 South Lewis Road in the unincorporated portion of Ventura County about one-half mile east of Calleguas Creek and is operated by Ventura Regional Sanitation District. The treatment plant provides secondary treatment and has a design

capacity of 1.5 mgd. Sludge is treated by anaerobic digestion and is dewatered in drying beds, and 75 tons of grit (per year) is disposed at the Oxnard Coastal Landfill. There are no current expansion plans, but the plant will have to either expand or utilize a portion of the Camarillo Sanitary District Water Reclamation Plant capacity.

(3) Ventura Water Renovation Facility: The facility is located at 1400 Spinnaker Drive, Ventura, near the mouth of the Santa Clara River and is operated by the City of Ventura. Wastewater receives tertiary treatment before final disposal to the Santa Clara River. Design capacity of the treatment plant is 14.0 mgd. Sludge is stabilized by anaerobic digesters and is dewatered by filter presses. The plant averages about 9,500 tons of dried sludge annually, which is disposed at the Simi Valley Landfill. Approximately 450 tons of grit is trucked to the Ventura Coastal Landfill annually. As of 1987, the chlorine contact ponds at the Ventura Water Renovation Facility are currently being upgraded from asphalt-lined bottoms to concrete bottoms with no immediate plans for future expansion of the facility. There are no immediate expansion plans, but the City of Ventura will need to consider expansion of its Water Renovation Facility before the year 2010.

(4) Fillmore Wastewater Treatment Plant: The plant is located at 50 "C" Street, Fillmore, in eastern Ventura County north of the Santa Clara River and is operated by VRSD. Wastewater receives secondary treatment before disposal in percolation ponds. Design capacity of the treatment plant is 1.33 mgd. The treatment plant presently generates approximately 200 tons of sludge and 30 tons of grit screenings per year. All the sludge is composted and reused as a soil amendment for the landscaping at the Santa Clara Landfill. This plant is in the process of being expanded to 2.2 mgd capacity.

(5) Montalvo Municipal Improvement District Treatment Facility and Liquid Waste Treatment Facility No. 1: The Montalvo Municipal Improvement District Treatment Facility is located at 3555 Ventura Road on the north bank of the Santa Clara River, adjacent to Liquid Waste Treatment Facility No. 1 and is operated by VRSD. Sludge generated by the batch reactor activated treatment plant is transferred to the adjacent Liquid Waste Treatment Facility for further treatment. The treatment capacity was recently expanded (1988) to 0.36 mgd. There are no additional expansion plans at this time.

(6) Moorpark Wastewater Treatment Plant (County Waterworks District No. 1): The plant is located west of Moorpark in the unincorporated portion of Ventura County, just south of Highway 118 and is operated by the County of Ventura. As of 1987, the treatment plant is operating at near its 1.5 mgd capacity, with plans to expand the plant to 3.0 mgd in 1988-89. There are no current expansion plans beyond this total. Sludges are dried on site, in ponds. Ponds are cleaned every two years and the dried sludge is disposed of at the Toland Road landfill. No tonnages were available for sludge from the Moorpark wastewater treatment plant at the time of the study in 1984 as it was undergoing expansion at that time.

(7) Nyeland Acres Wastewater Treatment Plant (County Waterworks District No. 1): The plant is located at 3250 East Ventura

Blvd. in the unincorporated portion of Ventura County, just north of the 101 Freeway and is operated by VRSD. Wastewater receives secondary treatment before disposal to the Beardsley Wash. Design capacity of the plant is 0.22 mgd. Liquid sludge from the treatment plant is periodically removed and transported to the Liquid Waste Treatment Facility for additional treatment. Approximately 200 tons of liquid sludge per year are generated at Nyeland Acres. There are no current expansion plans for this plant.

(8) Ojai Valley Sanitary District Wastewater Treatment Plant: The plant is located in the unincorporated portion of Ventura County, at 5891 Ventura Avenue between Highway 33 and the Ventura River and is operated by the Ojai Valley Sanitary District. Wastewater receives secondary treatment before final disposal to the Ventura River. Design capacity of the treatment plant is 3.0 mgd. Sludge is treated by anaerobic digestion, and is dewatered in drying beds. The dried sludge is made available to the public for use as soil amendment. The treatment plant presently produces 200 tons of dried sludge/grit annually.

The Ojai Valley Sanitary District Wastewater Treatment Plant has sufficient capacity until the year 2005, but possibly will need to expand by the year 2010. According to the General Manager of the Ojai Valley Sanitary District, this projected information is based on historical per capita wastewater flows of 300 gallons per day per "equivalent residential unit." By July 1993, it is expected that modifications will be completed so that the plant will provide full tertiary treatment.

(9) City of Oxnard Wastewater Treatment Facility: The facility is located at 6001 South Perkins Road, Oxnard, near Ormond Beach and is operated by City of Oxnard. The plant is situated on a 17 acre site adjacent to a residential development.

Wastewater receives secondary treatment before final disposal to the Pacific Ocean. Design capacity of the treatment plant in 1987 is 22.6 mgd. Sludge receives anaerobic digestion, with dewatering by vacuum filtration. The Oxnard Wastewater Treatment Facility is the largest producer of municipal sludge in Ventura County. The treatment plant presently averages 26,000 tons of dewatered sludge and 490 tons of grit/screenings annually. Sludge is trucked to the Simi Valley landfill and grit/screenings are trucked to the Ventura Coastal landfill for final disposal. This treatment plant also processes wastewater from the Point Mugu Naval Air Station, Port Hueneme Naval Construction Battalion Center, and the City of Port Hueneme. The City of Oxnard Wastewater Treatment Facility was expanded in 1990, to a design capacity of 31.7 mgd, with ultimate expansion to 39.6 mgd.

(10) Piru (Waterworks District No. 16) Wastewater Treatment Plant: The plant is located in the unincorporated portion of Ventura County, north of Highway 126 and is operated by VRSD. Design capacity of this secondary treatment plant is 0.2 mgd. Sludge is subjected to aerobic digestion and is dewatered in sludge drying beds. The treatment plant averages 30 tons of sludge/grit annually, all of which is trucked to the Toland Road Sanitary Landfill for disposal. There are no current expansion plans for this plant.

(11) City of Santa Paula Wastewater Treatment Plant: The plant is located at 905 Corporation Street, Santa Paula, south of the 126 Freeway and is operated by VRSD. Wastewater receives secondary treatment before final disposal to the Santa Clara River. Design capacity of the treatment plant is 2.55 mgd. Sludge is treated by anaerobic digestion and is dewatered in sludge drying beds. The treatment plant presently generates 500 tons of dried sludge and 100 tons of grit annually. All the sludge is composted and reused as a soil amendment for landscaping at the Santa Clara Landfill.

The City of Santa Paula plans to expand their plant to 2.65 mgd gallon capacity in 1995 and to 2.75 mgd in 2005. These expansions can be done earlier if flow demand warrants. A major expansion project will be needed about the year 2010.

(12) Saticoy Sanitary District Wastewater Treatment Plant: The plant is situated in the unincorporated portion of Ventura County north of the Santa Clara River and is operated by the Saticoy Sanitary District with a contract to VRSD. The physical plant consists of three septic tanks in series and approximately three acres of effluent percolation ponds. The average dry weather flow design capacity of the treatment plant is 0.24 mgd. Sludge and grit settled in the septic tanks is removed once every two years and trucked to the Liquid Waste Treatment Facility No. 1 for additional treatment. The plant averages 25 tons of sludge and grit generated annually. The Saticoy Sanitary District is currently improving their overall Wastewater Treatment Plant.

The Saticoy Sanitary District Wastewater Treatment Plant will reach capacity between 2010 and 2020. It has several options to examine including expansion at the site, conversion to different types of treatment process or connection to the City of Ventura Water Renovation Facility.

(13) Simi Valley County Sanitation District Water Quality Control Plant: The plant is located at 600 W. Los Angeles Avenue, Simi Valley (Arroyo Simi) and is operated by the City of Simi Valley. Wastewater receives tertiary treatment before final disposal in the Arroyo Simi. Design capacity of the treatment plant is 12.5 mgd. Sludge is subjected to anaerobic digestion and approximately 2,200 dry tons per year of digested sludge is mechanically dewatered by belt filter pressing and then solar dried in drying beds for hauling to a landfill if necessary. The treatment plant averages 600 tons of grit annually, which is disposed at the Simi Valley landfill. Presently all dried sludge from the treatment plant goes to the Simi Valley Landfill, however, composting for public reuse is planned for the future. The plant is now in the first phase (12.5 mgd capacity in 1993) of a four phase expansion. The composting capability will be part of the last phase (17.5 mgd capacity).

(14) Thomas Aquinas College Wastewater Treatment Plant: The College is located about 4 miles north of the City of Santa Paula at 10000 North Ojai Road. Since the local area was unsewered, the College constructed a self contained package treatment plant with a design capacity of 40,000 gallons per day. This plant provides tertiary treatment (secondary treatment with chlorination. After treatment, the effluent goes to an impervious reservoir having a maximum capacity of

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2,120,000 gallons up to 30,000 gallons per day of treated and chlorinated domestic sewage effluent is discharged by landscape spray irrigation of campus lawns. Sewage sludge is transported via pumper truck to the Liquid Waste Treatment Facility No. 1 at 3555 Ventura Road. There are no expansion plans for this plant.

(15) City of Thousand Oaks - Hill Canyon Wastewater Treatment Plant: The plant is located at 9600 Santa Rosa Valley, Thousand Oaks, adjacent to the north fork of the Arroyo Conejo and is operated by the City of Thousand Oaks. Wastewater receives tertiary treatment before final disposal to the north fork of the Arroyo Conejo. Design capacity of the treatment plant is 10.3 mgd. Sludge is digested and then composted in drying beds. The treatment plant presently generates approximately 2,700 tons of dried sludge and 120 wet tons of grit annually. To the extent possible, dried sludge from the treatment plant is given to the public for use as soil amendment. However, in past years approximately 90% of the sludge generated has been disposed of at the Simi Valley landfill. The City is in the process of constructing a sludge dewatering facility which will utilize a belt filter press. Grit is hauled to the Simi Valley landfill for disposal. The Hill Canyon Wastewater Treatment Plant expanded to 10.8 mgd capacity in 1989. The ultimate plant capacity will be designed for 14 mgd.

(16) City of Thousand Oaks - Olsen Road Water Reclamation Plant: The plant is located at 2051 Olsen Road, Thousand Oaks, off Freeway 23 and is operated by the City of Thousand Oaks. Design capacity of the treatment plant is 0.75 mgd. Sludge is treated by aerobic digestion and is dewatered in drying beds. Dried sludge is trucked away by private citizens for use on lawns as fertilizer or soil amendment. The treatment plant presently produces 60 tons of sludge and five tons of grit annually. Wastewater receives secondary treatment before it is discharged to an adjacent water course. There are no expansion plans for this plant.

(17) Potential Saticoy Sewage Waste Treatment Facility: There is the potential for a new sewage treatment facility in Saticoy in the future. A precise location has not been determined.

(18) Ventura County Jail/Todd Road Site Sewage Treatment Plant: The new County jail facility will be located in the west Santa Clara River Valley, south of Highway 126 at the terminus of Todd Road. At full buildout, the facility will be occupied by 2,307 inmates and 615 employees. Maximum occupancy at the jail will produce approximately 245,300 gallons per day (gpd) of sewage. To accommodate this projected sewage generation, an onsite sewage treatment plant will be constructed.

(19) Limoneira Wastewater Treatment Plant: The plant is located about 2,000 feet west of Cummings Road at Middle Road. The plant is operated by the Limoneira Company. About 50,000 gallons per day of liquid wastes from packing houses, residences and a trailer park are treated by means of two Imhoff tanks. Effluent is discharged to percolation/ evaporation lagoons.

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(20) Olivelands Wastewater Treatment Plant: The plant is located about 400 feet south of the intersection of Foothill and Aliso Canyon Roads. The plant is operated by the Limoneira Company. About 15,000 gallons per day of liquid waste from farmworkers residences is treated by means of an Imhoff tank and the effluent is discharged to percolation/evaporation lagoons.

(21) The Thacher School Wastewater Treatment Plant: The school is located in an unsewered area about two miles northeasterly of the City of Ojai. The school operates a self-contained package treatment plant for its own use.

4.4.2.2 Sanitation Districts

The Ventura County Sanitation Districts Map (Figure 4.4.3) shows the County sanitation districts and their respective service areas.

The Sanitation Service Areas located within Ventura County are County Service Area 29 and the Triunfo County Sanitation District. County Service Area 29 collects sewage for the North Coast area. Its facilities are connected to the City of Ventura's sewerage system, which treats the effluent on a contractual basis.

The Triunfo County Sanitation District currently provides sewer service to portions of Westlake Village, Thousand Oaks, Lake Sherwood, Oak Park and Bell Canyon. There are over 8,722 connections to the sewer system resulting in a daily flow of three million gallons. The wastewater is conveyed to the Tapia Wastewater Treatment Plant (located in Calabasas Los Angeles County), which is jointly owned by the Triunfo County Sanitation District and the Las Virgenes Metropolitan Water District. With the development of Lake Sherwood, Oak Park and the North Ranch areas of the City of Thousand Oaks, approximately 2,000 new connections are anticipated by 1998. Appropriate expansion of the treatment plant is taking place to facilitate this growth.

4.4.2.3 Projected Wastewater Flows by Sewer Service Areas

The Countywide population and dwelling unit forecasts, which were adopted by the Board of Supervisors on May 7, 1985, were used as the basis for the Sanitation District service area population forecasts (Refer to the Land Use Appendix).

The adopted forecasts were prepared at the Growth/Nongrowth area level, which does not coincide with the sewer service area boundaries. To more closely approximate the sewer service area boundaries, the adopted forecasts were disaggregated by Analysis Zone (AZ), (See Land Use Appendix), then reaggregated by sewer service area.

It should be noted that current sewer service area boundaries were not used. Instead, LAFCO adopted Sphere of Influence boundaries for each sewer district were used. The Sphere boundaries, which represent the ultimate service area boundaries, are a more accurate indication of future areas to be served.

The steps in determining wastewater flows for each sewer service district area are listed below:

(1) Determine Population by Sewer Service Area

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- To disaggregate the population forecast by AZ, and to interpolate that forecast for intervening years, a disaggregation and interpolation of the dwelling unit forecast was undertaken for the year 2010. This disaggregation was based on a ratio of the general plan holding capacity for the individual AZ, compared to the holding capacity for the entire Growth/Nongrowth Area in which the AZ is located.

- The year 2010 dwelling unit forecast figures for each AZ were then interpolated back in five-year increments between 1980 and 2010. Both this interpolation and the interpolation which was used in the adopted Countywide dwelling unit forecast are based on a straight-line interpolation, so the disaggregation figures are consistent with the adopted dwelling unit forecast figures.

- The population per dwelling unit ratios for each AZ were then obtained by dividing the actual 1980 ratio for the AZ by the 1980 Countywide ratio, then multiplying by the adopted Countywide ratio which was forecast for each forecast year. The ratios for individual AZ's were also merged with the County ratio in 100 years. This is the same methodology which was used to obtain the ratios for each Growth/Nongrowth Area which appear in the adopted forecasts.

- The population forecast for each AZ was obtained by multiplying the dwelling unit forecast by the population per dwelling unit forecast.

- The population forecast for each sewer service district was obtained by adding or subtracting the AZ forecasts from Growth/Nongrowth Area totals (where appropriate) or by simply aggregating the Analysis Zones (see Figure 4.4.4). In some cases, the AZ boundaries are split by sewer service area boundaries, in which case further disaggregations were performed, based on general plan holding capacity. However, where the AZ boundary is relatively close to the sewer service area boundary, the figure for the entire AZ was used.

(2) Determine Industrial Acreage for Sewer Service Areas

- The industrial acreage forecast for the year 2010 was obtained by determining future acreages for individually-designated lands, as shown on each general plan. These acreage figures were disaggregated by AZ. It was assumed that the designation would be built out by the year 2010.

- An interpolation was made between 1980 and 2010, based on 1976 records from the County Assessor's Office of actual industrial acreage, and based on industrial acreage forecasts prepared at the AZ level for the 1980 "208" Plan.

- The industrial acreage forecast for each sewer service district was obtained by reaggregating the AZ forecast figures by sewer service districts (see Figure 4.4.5).

(3) Determine Domestic/Commercial Wasteload Flow

- Domestic/commercial loading factors (expressed in gallons per capita per day) were obtained by dividing current average influent flow volumes by the 1985 population. (In some cases, the current flow volumes would have not yet been obtained. For these districts, the 1980 "208" Plan loading factors were used.) The loading factors differ from sewer district to sewer district, primarily due to differences in the amount of commercial activity. Flow factors may also be affected by infiltration of the collection system (see Figure 4.4.6).

- Total flow from domestic/commercial uses was then forecast by multiplying the population forecast by the domestic/commercial loading factor (see Figure 4.4.7).

(4) Determine Industrial Wasteload Flow

- Industrial loading factors (expressed in gallons per acre per day) were determined by dividing current average industrial inflow volumes by the 1985 industrial acreage estimate.

- Total flow from industrial uses was forecast by multiplying the industrial acreage forecast by the industrial loading factor (see Figure 4.4.8).

(5) Determine Total Wasteload Flow

Total wasteload flow was determined simply by adding the forecast domestic/commercial wasteload flow to the forecast industrial wasteload flow. Information on existing capacity, projected flow to the year 2010, and future expansion plans for each sewage treatment plant is also included (see Figure 4.4.9).

(6) Compare Total Wasteload Flow to Treatment Plant Capacity

As a final step, wasteload flows were plotted graphically against current and future treatment plant capacity levels, to determine future treatment facility needs over the next 20 years.

Figures 4.4.10 through 4.4.25 show Sewage Treatment Plant capacity staging for each treatment plant from 1980 to 2010 in order to accommodate development within each service area. Information for the Liquid Waste Treatment Facility No. 1 (Montalvo) and Thomas Aquinas College is not available.

4.4.3 SOLID WASTE DISPOSAL SITES

Solid waste disposal sites (aka "waste management units") are those facilities used for the final deposition of wastes onto the land. Wastes are categorized by the State into four general types: Hazardous Waste, Designated Waste, Nonhazardous Waste, and Inert Waste. Currently only certain Designated wastes and all Nonhazardous Waste can be legally disposed of on land in Ventura County. Hazardous wastes currently must be disposed of outside the County. Designated, Nonhazardous, and Inert solid waste disposal sites are operated pursuant to requirements and criteria established by the State Water Resources Control Board (SWRCB) and the

California Integrated Waste Management Board (CIWMB) as well as many other agencies. They are regulated and inspected by the staff of the Regional Water Quality Control Board (RWQCB), and the Ventura County Environmental Health Division, which is the Local Enforcement Agency (LEA).

Permitted solid waste disposal sites are located as follows:

4.4.3.1 Bailard Landfill

The Bailard Landfill was reopened as a municipal waste landfill in 1989. This landfill was formerly operated by Robinson Services on leased land. The 160 acre operational portion of the Bailard Landfill Site has an estimated capacity of 6.7 million cubic yards and is intended to be used as a municipal waste site for disposal of Nonhazardous and Inert wastes. The site is located adjacent to and south of the Santa Clara River, approximately 1,500 feet west of the Victoria Avenue Bridge, in the unincorporated area of the County. The site will serve the western waste shed area including Oxnard, Port Hueneme, Ventura, the Ojai Valley, Camarillo and the North and South Coast communities. The permitted site life is five years of active landfill operations or December 1993, whichever occurs first. However, VRSD has applied for a time extension with a estimated increase in capacity to 7.3 million cubic yards for the site. When the site is closed, it may be used for recreational purposes or converted to open space.

4.4.3.2 Beardsley Landfill

The City of Camarillo owns a 20 acre site located at Mariano and Beardsley Roads in Camarillo. The facility was only permitted for disposal of Inert wastes, including street cleanings and debris from road construction and repair work. The site has not, however, been used for landfilling and the Regional Water Quality Control Board has indicated that the Waste Discharge Requirements (WDR's) for that site will be rescinded. Consequently, the site cannot become operational without the acquisition of new permits from regulatory authorities.

4.4.3.3 Coastal Landfill

This 83 acre municipal waste site (closed 1989) is an extension of the old Santa Clara Site. It is located near Gonzales Road in the City of Oxnard, approximately 500 feet east of its intersection with Victoria Avenue, adjacent to and south of the Santa Clara River. This site is owned by VRSD.

4.4.3.4 Simi Landfill Site

On January 9, 1983, Waste Management, Inc., purchased and initiated operations at the Simi Landfill site. The 233 acre Simi site is operated under Solid Waste Facility Permit 56-AA-007 and Conditional Use Permit 3142 both issued by Ventura County. It is located at 111 West Los Angeles Avenue, north of the Simi Valley Freeway approximately ½ mile west of Madera Road in the unincorporated area of Ventura County. Simi is designated a Class III landfill, which takes non-hazardous wastes and inert wastes. In addition, sewage sludge cake (nonhazardous waste) from various treatment plant operations are accepted.

The total waste handled in 1987 was approximately 411,000 tons. This site serves Simi Valley, Moorpark, Thousand Oaks, Oak Park and parts of Los Angeles County. The Simi landfill is expected to reach

capacity soon. However, the site operators have applied to expand the site, which would increase the waste disposal site life by up to an additional 25 years.

4.4.3.5 Texaco Sites A and B

Texaco Site A is a 3 acre land farm with a total estimated capacity of 4,840 cubic yards. This site is located in School Canyon north of the City of Ventura and handles a maximum of 30 tons of non-hazardous oil field wastes per operating day. Site B is a 30 acre land farm located on Hall Canyon Road. This site handles an average of 37 tons of non-hazardous oil field waste a day. The site capacity is estimated at 48,400 cubic yards with a site life of 54 years. Both sites are operated under a Solid Waste Facility Permit and a Conditional Use Permit issued by the County of Ventura. These sites are privately operated Class II disposal facilities on leased land.

These sites can operate seven days per week during daylight hours. The types of waste received are tank bottom sediments, drilling muds and cuttings, diatomaceous earth, work over and redrilling materials, and other non-hazardous oil field wastes. The composite of these materials have been declared non-hazardous by the California Department of Health Services.

4.4.3.6 Texaco Landfill Site C

This site is a small, 5 acre, private municipal waste landfill, located in Hall Canyon, approximately two and one half miles east of the intersection of School Canyon Road and Ventura Avenue (at the terminus of School Canyon Road) near the City of Ventura. The capacity of this site is estimated to be approximately 20,260 cubic yards. The property owner presently leases this site to the landfill operator, which is the Texaco Producing, Inc. This site takes only Group 3 wastes (such as wood, metal, rubber, earth, plastics, rock, and concrete) generated from Texaco operations. The site is expected to continue operating well into the future, due to the small amount of waste deposited. Texaco Landfill receives 108 tons of waste per year. This site operates under solid waste facility permit issued in 1979, and has an expected life of 50 years. Texaco has applied for a Conditional Use Permit to reflect expanded operations at the project site.

4.4.3.7 Toland Road Landfill

The 161 acre Toland Road site is owned by VRSD and is located at 3500 North Toland Road, is at the northerly terminus of the road. The site is three miles west of Fillmore and three and one half miles northeast of the City of Santa Paula. This is a municipal waste site. It serves the communities of Fillmore, Santa Paula, and Piru. The Toland Road site is operated under a Conditional Use Permit #3141 and a Solid Waste Facility Permit. The site receives non-hazardous waste including empty, triple rinsed pesticide containers and dry sewage sludge cake. The total waste handled at the site in 1989 was approximately 40,000 tons. Life expectancy for the Toland Road site is estimated at approximately 50 years at the present waste generation rate, with an estimated remaining capacity of 5 million cubic yards of waste.

Refer to Figure 4.4.1 for a map showing location of the Solid Waste Disposal Sites.

4.4.4 OFF-SITE WASTE TREATMENT FACILITIES

Off-site waste treatment facilities are those facilities which accept wastes from outside their permit boundaries for treatment to change the physical, chemical, or biological characteristics of the waste so as to render it less harmful to the quality of the waters of the State, safer to handle, easier to contain or manage, including use as a fuel, nutrient or soil amendment.

Five existing off-site nonhazardous waste treatment sites currently (1989) handle liquid wastes. These facilities, and the wastes they currently accept for processing, are noted below:

- Chevron Oil Field Brine Processing Facility treats solely oil field brines produced by Chevron at their new plant located at Gonzales Road and Harbor Boulevard.
- Liquid Waste Treatment Facility No. 1 (Montalvo) accepts wastewater from septic tanks, agricultural waste, water softener brines and oil field brines.
- Santa Clara Wastewater Company treats oil field brines and wastewater.
- VenVirotek Chem Fix Processing Facility treats drilling muds, water and oil based nonhazardous oil field waste and sewage sludge.
- Wooley Road Wastewater Disposal Facility treats solely oil field brines produced by Shell Oil at the former Chevron site at Wooley Road and Mercantile Street.

The majority of the liquid industrial waste handled at the five sites is nonhazardous oil field waste. Different phases of oil production yield different types of oil field waste. Types and sources of oil field waste include:

- Drilling muds and cuttings from drilling operations
- Tank bottoms and produced water from oil separation operations
- Scrubber sludge from gas cleaning operations
- Diatomaceous earth, slop oil, residual oil, and wastewaters from water cleaning operations
- Oil contaminants
- Any other waste products from oil/gas development and production

4.4.4.1 Chevron Oil Field Brine Processing Facility

Chevron McGrath Five Tank Farm, located at Harbor and Gonzales, is a new oil field brine treatment facility which opened in the Summer of 1986. The facility is solely for oil field brines produced by Chevron's oil operations. Oil and sulfide is removed from the brine prior to discharge to the Oxnard Wastewater Treatment Plant.

4.4.4.2 Liquid Waste Treatment Facility No. 1 (Montalvo)

The Liquid Waste Treatment Facility No. 1 (LWTF) operated by Ventura Regional Sanitation District (VRSD) is located in Montalvo, and handles wastes which are unsuitable for direct disposal into the

sewage system without pretreatment. LWTF accepts wastewater from septic tanks, agricultural waste, water softener brines, compatible industrial wastes and oil field brines. Treatment required for brine waters prior to discharge consists of chlorination by the Purifax process to reduce the biological oxygen demand (BOD).

Liquid oil field waste makes up approximately five percent of the waste stream treated at this facility daily. The facility is presently operating close to capacity. Treated water is discharged by pipeline to the Oxnard Wastewater Treatment Plant and 1,400 tons of dried sludge per year is disposed at the Simi Valley Landfill.

4.4.4.3 Santa Clara Wastewater Company

The privately operated Santa Clara Wastewater Company treats and disposes of brines or produced water oil field waste. This facility is located in Santa Paula. Treatment of these oil field wastes comprises 90% of the liquid waste handled at this facility. Treatment consists of oil skimming and recovery, solid liquid separation, and biological treatment by aerated lagoons. Approximate disposal rate of oil field brines is 3,000 barrels/day of the liquid waste. Treated brines are transported via a 14 mile pipeline to the Oxnard Wastewater Treatment Plant.

4.4.4.4 VenVirotek Chemfix Processing Facility

VenVirotek operates a facility for the treatment, processing, stabilization and disposal of nonhazardous drilling cuttings and sewage sludge on a six acre portion of the 180 acre Bailard Landfill site. This site is located about six-tenths of a mile northwesterly of the intersection of Victoria Avenue and Gonzales Road, west of the City of Oxnard.

4.4.4.5 Wooley Road Wastewater Disposal Facility

Shell Oil Company purchased the former Chevron-owned facility, located at Wooley Road and Mercantile Street. This facility removes oil and sulfide from the brine prior to discharge to the Oxnard Wastewater Treatment Plant.

4.4.5 WASTE TRANSFER STATIONS

Waste transfer stations are those facilities utilized to receive wastes from outside their permit boundaries to temporarily store and/or separate wastes, or transfer the solid wastes directly from smaller to larger vehicles for transport.

Transfer refers to the temporary storage of waste after it has been collected at its point of generation but before it reaches its final point of disposal. Transfer stations, also called anti-litter stations, are generally created either as localized temporary collection points as a convenience to local residents and businesses, or as a major transfer point for the reduction of waste and/or shifting waste from smaller to larger, more cost effective vehicles for the transport of wastes.

Storage refers to the temporary onsite holding of waste before it is collected for disposal. Nonhazardous waste storage is regulated by local government. The County as well as many of the cities have solid waste ordinances for regulating the storage of solid wastes.

4.4.5.1 Ojai Transfer Station (Anti-Litter)

The Ojai Transfer Station is located adjacent and north of Old Baldwin Road between Rice Road and Burnham Road, across from the County Honor Farm, and it is open two days per week. It provides litter management, brush shredding and resource recovery for the Ojai area. This facility is approximately 5.4 acres in size and handles approximately 20 tons per operating day of materials, some of which can be recycled. There are approximately 190 vehicular trips each operating day. Waste materials are disposed at district landfills. This facility is leased and operated by the VRSD under a Solid Waste Facility Permit. In April 1988, the Planning Commission approved a Conditional Use Permit to establish a redemption center (per AB 2020) at the project site. The facility has been operating as a legal non-conforming use.

4.4.6 CONCLUSIONS

Any plan for the future development of Ventura County would be incomplete if it did not contain a means of ensuring adequate waste treatment and disposal facilities to accommodate planned growth. Issues which should be addressed in the Goals, Policies, and Programs of the General Plan include means to ensure that new development will be adequately served by public sewers or individual septic disposal systems in a manner which will not adversely affect water quality. Additionally, Goals, Policies and Programs of the General Plan should ensure that there will be continuous waste disposal, treatment and transfer/storage capacity in the County and ensure that future land use decisions do not preclude development of landfill sites.

REFERENCES

CH$_2$M Hill & County of Ventura, Ventura County Wastewater Reuse Study Facilities Plan, December 1981.

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Montgomery, James, M., Sludge Management in Ventura County, Pasadena, July 1985.

Ventura County Board of Supervisors in cooperation with Regional Water Quality Control Board, Los Angeles, 208 Areawide Water Quality Management Plan - 1980, Vol I-IV, July 1980.

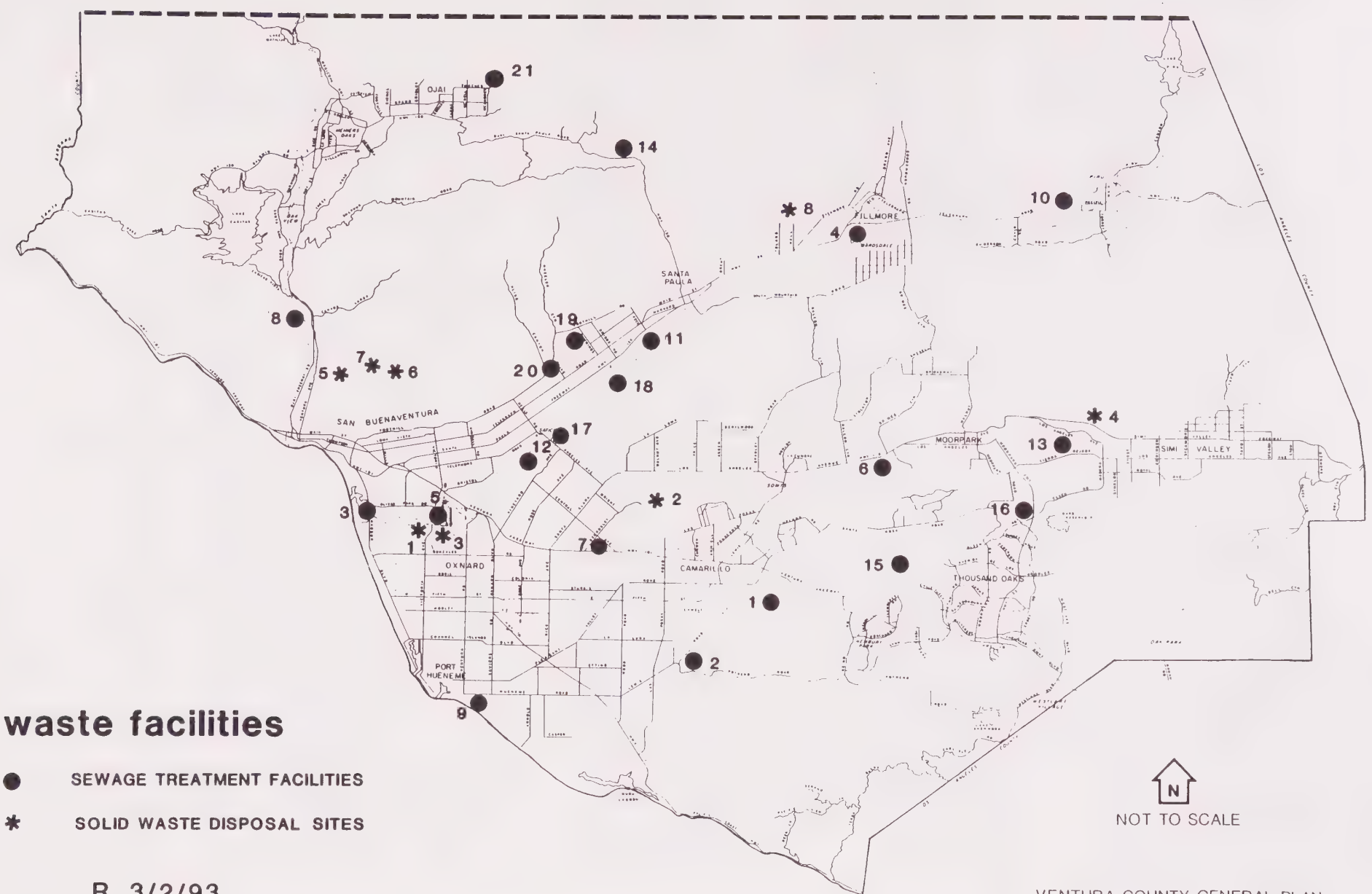
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Sewage Treatment

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John McLaughlin, County of Ventura Environmental Health Division
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Eric Oltman, Ojai Valley Sanitary District Wastewater Treatment Plant
Kelly Polk, Ventura Regional Sanitation District
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Solid Waste

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Kay Martin, County of Ventura Solid Waste Division



waste facilities

- ● SEWAGE TREATMENT FACILITIES
- * SOLID WASTE DISPOSAL SITES

R. 3/2/93

SOURCE: VENTURA COUNTY PLANNING DIVISION

N

NOT TO SCALE

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX -FIGURE 4.4.1

WASTE FACILITIES MAP (FIG. 4.4.1) LEGEND

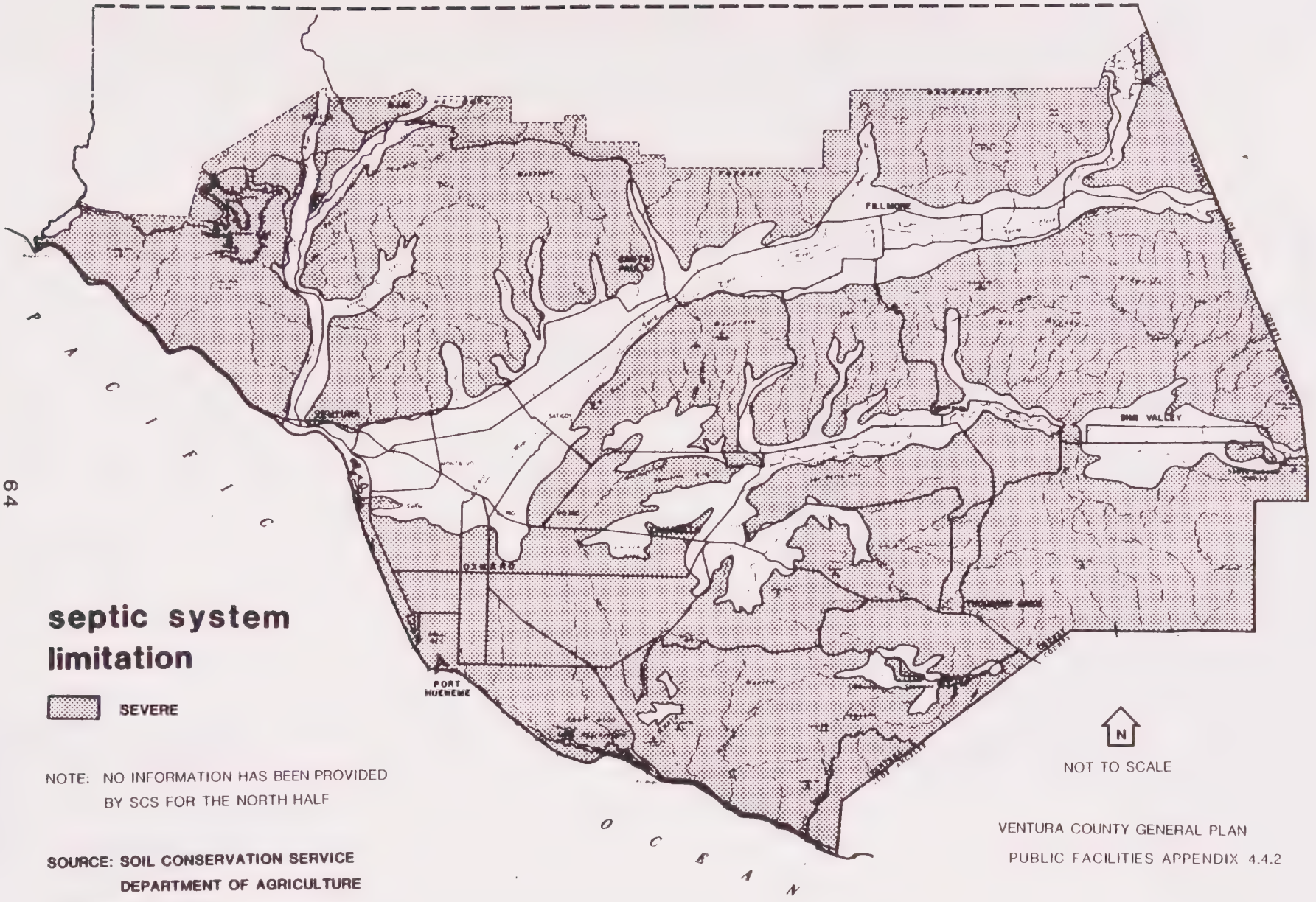
● SEWAGE TREATMENT FACILITIES

1. Camarillo Sanitary District Water Reclamation Plant
2. Camrosa Wastewater Treatment Plant
3. Ventura Water Renovation Facility
4. Fillmore Wastewater Treatment Plant
5. Montalvo Municipal Improvement District Treatment Facility
6. Moorpark Wastewater Treatment Plant
7. Nyeland Acres Wastewater Treatment Plant
8. Ojai Valley Sanitary District Wastewater Treatment Plant
9. Oxnard Wastewater Treatment Facility
10. Piru (Waterworks District No. 16) Wastewater Treatment Plant
11. Santa Paula Wastewater Treatment Plant
12. Saticoy Sanitary District Wastewater Treatment Plant
13. Simi Valley Co. Sanitation District Water Quality Control Plant
14. Thomas Aquinas College Wastewater Treatment Plant
15. Thousand Oaks - Hill Canyon Wastewater Treatment Plant
16. Thousand Oaks - Olsen Road Water Reclamation Plant
17. Saticoy - Potential Sewage Treatment Facility
18. Ventura County Jail/Todd Road Site Sewage Treatment Plant
19. Limoneira Wastewater Treatment Plant
20. Olivelands (Limoneira) Wastewater Treatment Plant
21. The Thacher School Wastewater Treatment Plant

* SOLID WASTE DISPOSAL SITES

1. Bailard Landfill
2. Beardsley Landfill
3. Coastal Landfill
4. Simi Valley Landfill
5. Texaco Site "A" (Oilfield Waste - School Canyon)
6. Texaco Site "B" (Oilfield Waste - Hall Canyon)
7. Texaco Site "C" (Refuse - Hall Canyon)
8. Toland Road Landfill

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septic system limitation

SEVERE

NOTE: NO INFORMATION HAS BEEN PROVIDED BY SCS FOR THE NORTH HALF

SOURCE: SOIL CONSERVATION SERVICE DEPARTMENT OF AGRICULTURE

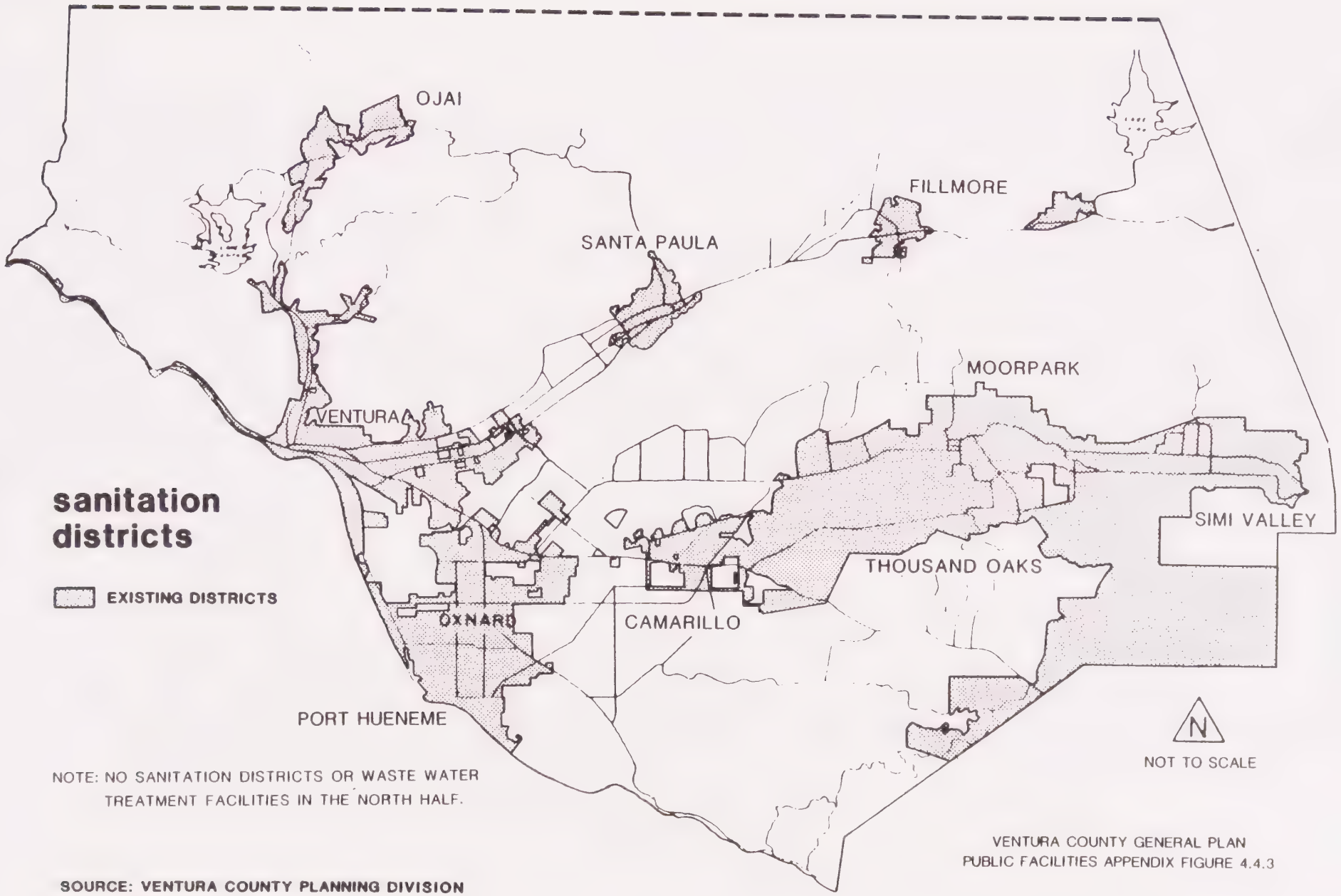
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NOT TO SCALE

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX 4.4.2



NOTE: NO SANITATION DISTRICTS OR WASTE WATER TREATMENT FACILITIES IN THE NORTH HALF.

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX FIGURE 4.4.3

SOURCE: VENTURA COUNTY PLANNING DIVISION
DATE: MARCH 1987

FIGURE 4.4.4

POPULATION BY SEWER SERVICE AREA

Sanitation District	1980	1985	1990	1995	2000	2005	2010
Camarillo Sanitary District	30,150	33,387	38,086	40,266	42,297	45,269	48,348
Camrosa County Water District	9,852	13,546	18,437	23,422	28,110	30,915	33,494
County Service Area No. 30 (Nyeland Acres)	1,307	1,320	1,381	1,440	1,503	1,568	1,627
County Waterworks District No. 1 (Moorpark)	9,362	15,315	23,919	30,328	36,346	42,226	47,558
County Waterworks District No. 16 (Piru)	1,368	1,400	1,810	1,980	2,150	2,300	2,440
Fillmore Sanitary District	9,604	10,300	12,230	13,310	14,260	15,220	16,170
Montalvo Municipal Improvement District	3,075	3,238	3,337	3,439	3,549	3,651	3,772
Ojai Valley Sanitary District	22,867	24,203	25,370	26,114	26,782	27,524	28,213
Oxnard Sewer District (Includes Port Hueneme)	141,115	149,209	167,255	182,725	204,700	223,692	244,412
Santa Paula Sanitary District	20,889	22,320	24,500	26,000	27,500	29,000	30,500
Saticoy Sanitary District	1,502	1,519	1,675	1,842	1,995	2,149	2,311
Simi Valley County Sanitary District	80,180	90,525	103,094	112,548	121,022	129,060	136,761
Thousand Oaks Municipal Sewer District No. 1							
a. Hill Canyon Plant	81,873	91,214	96,162	101,478	106,839	110,616	111,693
b. Olsen Road Plant	1,910	2,393	2,559	2,755	2,420	3,019	3,097
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood, and Bell Canyon)	14,362	16,533	27,912	35,296	37,610	39,504	41,211
Ventura Sanitary District	76,415	83,131	85,477	93,824	102,246	107,662	113,407

Source: Ventura County Planning Division, 1987

FIGURE 4.4.5

INDUSTRIAL ACREAGE BY SEWER SERVICE AREA

Sanitation District	1980	1985	1990	1995	2000	2005	2010
Camarillo Sanitary District	198	286	372	460	546	633	720
Camrosa County Water District	20	77	135	194	250	308	365
County Service Area No. 30 (Nyeland Acres)	0	2	3	5	6	8	9
County Waterworks District No. 1 (Moorpark)	40	105	169	235	297	362	426
County Waterworks District No. 16 (Piru)	21	29	37	45	52	60	68
Fillmore Sanitary District	70	113	154	197	239	281	323
Montalvo Municipal Improvement District	3	3	3	3	3	3	3
Ojai Valley Sanitary District	69	95	120	147	173	198	224
Oxnard Sewer District (Includes Port Hueneme)	719	1,109	1,494	1,885	2,271	2,657	3,046
Santa Paula Sanitary District	239	269	302	331	360	394	423
Saticoy Sanitary District	46	46	46	46	46	46	46
Simi Valley County Sanitary District	147	383	619	858	1,091	1,329	1,563
Thousand Oaks Municipal Sewer District No. 1							
a. Hill Canyon Plant	228	306	380	458	531	608	683
b. Olsen Road Plant	0	0	0	0	0	0	0
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	58	84	111	137	162	190	215
Ventura Sanitary District	234	400	564	732	897	1,062	1,227

Source: Ventura County Planning Division, 1987

FIGURE 4.4.6

SEWAGE TREATMENT PLANT LOADING FACTORS

Sanitation District	Domestic/Commercial*		Industrial**	
	1980 Plan	Proposed	1980 Plan	Proposed
Camarillo Sanitary District	80	93	822	1,399
Camrosa County Water District	100	70	N/A	6
CSA No. 30 (Nyeland Acres)	72	95	0	500
County Waterworks District No. 1 (Moorpark)	79	88	1,070	1,070
County Waterworks District No. 16 (Piru)	82	63	234	517
Fillmore Sanitary District	91	101	1,072	885
Montalvo Municipal Improvement District	68	69	N/A	3,333
Ojai Valley Sanitary District	78	78	984	984
Oxnard Sewer District	98	102	2,250	3,427
Santa Paula Sanitary District	88	90	645	372
Saticoy Sanitary District	77	149	960	217
Simi Valley County Sanitary District	82	87	305	2,285
Thousand Oaks Municipal Sewer District No. 1				
a. Hill Canyon Plant	100	99	1,688	980
b. Olsen Road Plant	89	100	0	0
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	104	100	0	1,030
Ventura Sanitary District	98	98	654	654

*Gallons per capita per day (gpcd)
**Gallons per acre per day (gpad)
N/A = Not Applicable

Source: Based on estimates of current average influent flow volumes, divided by 1985 population and industrial acreage estimates. Where current flow volumes not available, 1980, "208" Plan loading factors were used.

FIGURE 4.4.7

FLOW FROM DOMESTIC/COMMERCIAL USES

(All Figures in 1,000 Gallons Per Day)

Sanitation District	1980	1985	1990	1995	2000	2005	2010
Camarillo Sanitary District	2,804	3,100	3,542	3,745	3,934	4,210	4,496
Camrosa County Water District	689	950	1,291	1,640	1,968	2,164	2,345
CSA No. 30 (Nyeland Acres)	124	125	131	137	143	149	155
County Waterworks District No. 1 (Moorpark)	825	1,348	2,105	2,669	3,198	3,716	4,185
County Waterworks District No. 16 (Piru)	86	88	114	125	136	145	154
Fillmore Sanitary District	970	1,040	1,235	1,344	1,440	1,537	1,633
Montalvo Municipal Improvement District	212	222	230	237	245	252	260
Ojai Valley Sanitary District	1,784	1,888	1,979	2,037	2,089	2,147	2,201
Oxnard Sewer District	14,394	15,200	17,060	18,638	20,879	22,817	24,930
Santa Paula Sanitary District	1,880	2,010	2,205	2,340	2,475	2,610	2,745
Saticoy Sanitary District	224	227	250	274	297	320	344
Simi Valley County Sanitary District	6,976	7,875	8,850	9,650	10,529	11,228	12,100
Thousand Oaks Municipal Sanitary District No. 1							
a. Hill Canyon Plant	8,105	9,000	9,520	10,046	10,577	10,951	11,058
b. Olsen Road Plant	191	240	256	276	292	302	310
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	1,436	1,653	2,791	3,530	3,761	3,950	4,121
Ventura Sanitary District	7,489	8,147	8,377	9,195	10,020	10,551	11,114

Source: Population forecast times domestic/commercial loading factor. For 1985, actual flow estimates are shown (where available).

FIGURE 4.4.8

FLOW FROM INDUSTRIAL USES

(All Figures in 1,000 Gallons Per Day)

Sanitation District	1980	1985	1990	1995	2000	2005	2010
Camarillo Sanitary District	277	400	520	644	764	886	1,007
Camrosa County Water District	0.12	0.50	0.81	1.15	1.50	1.85	2.19
CSA No. 30 (Nyeland Acres)	0	1.00	1.50	2.50	3.00	4.00	4.50
County Waterworks District No. 1 (Moorpark)	43	112	181	251	318	387	456
County Waterworks District No. 16 (Piru)	11	15	19	23	27	31	35
Fillmore Sanitary District	62	100	136	174	212	249	286
Montalvo Municipal Improvement District	10	10	10	10	10	10	10
Ojai Valley Sanitary District	68	93	118	145	170	195	220
Oxnard Sewer District	2,464	3,800	5,120	6,460	7,783	9,106	10,439
Santa Paula Sanitary District	89	100	112	123	134	147	157
Saticoy Sanitary District	10	10	10	10	10	10	10
Simi Valley County Sanitary District	336	350	450	550	650	700	800
Thousand Oaks Municipal Sanitary District No. 1							
a. Hill Canyon Plant	223	300	372	449	520	596	669
b. Olsen Road Plant	0	0	0	0	0	0	0
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	60	87	114	141	167	196	221
Ventura Sanitary District	153	262	369	479	587	695	802

Source: Industrial acreage forecast times industrial loading factor. For 1985, actual flow estimates are shown (where estimates are available).

FIGURE 4.4.9

EXISTING CAPACITY AND PROJECTED FLOW FOR SEWAGE TREATMENT PLANTS TO YEAR 2010

(All Figures in 1,000 Gallons Per Day)

Sanitation District	1987 Treatment Plant Capacity	Projected Flow						
		1980	1985	1990	1995	2000	2005	2010
Camarillo Sanitary District	6,000	3,081	3,500	4,139	4,579	4,995	5,307	5,613
Camrosa County Water District	1,500	689	951	1,292	1,641	1,970	2,166	2,347
CSA No. 30 (Nyeland Acres)	220	124	126	133	140	146	153	160
County Waterworks District No. 1 (Moorpark)	1,500	868	1,460	2,286	2,920	3,516	4,103	4,641
County Waterworks District No. 16 (Piru)	200	97	103	133	148	163	176	189
Fillmore Sanitary District	1,330	1,032	1,140	1,371	1,518	1,652	1,786	1,919
Montalvo Municipal Improvement District	250	222	232	240	255	255	262	270
Ojai Valley Sanitary District	3,000	1,852	2,000	2,300	2,500	2,800	3,000	3,300
Oxnard Sewer District	22,600	16,858	19,000	22,180	25,098	28,662	31,923	35,369
Santa Paula Sanitary District	2,550	1,969	2,000	2,200	2,340	2,480	2,610	2,750
Saticoy Sanitary District	300	234	237	260	284	307	330	354
Simi Valley County Sanitary District	9,600	7,312	8,500	9,100	10,100	11,100	12,100	13,100

FIGURE 4.4.9 (Continued)

EXISTING CAPACITY AND PROJECTED FLOW FOR SEWAGE TREATMENT PLANTS TO YEAR 2010

(All Figures in 1,000 Gallons Per Day)

Sanitation District	1987 Treatment Plant Capacity	Projected Flow						
		1980	1985	1990	1995	2000	2005	2010
Thousand Oaks Municipal Sanitary District No. 1								
a. Hill Canyon Plant	10,300	8,328	8,900	10,100	11,000	11,600	12,100	13,300
b. Olsen Road Plant	750	191	240	256	276	292	302	310
Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	8,000	1,496	1,740	2,905	3,671	3,428	4,146	4,342
Ventura Sanitary District	14,000	7,642	8,409	8,746	9,674	10,607	11,246	11,916

Source: Flow from domestic/commercial uses, plus flow from industrial uses. For 1985, actual average daily flow estimates are shown (where estimates are available) Ventura County Planning Division, 1987

*NOTE: Information shown is for the Triunfo County Sanitation District portion of the Tapia Wastewater Treatment Plant located in Los Angeles County. The projected flow for the Triunfo County Sanitation District includes Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon. The wastewater from Oak Park, North Ranch, Lake Sherwood and Westlake is treated at the Tapia Wastewater Treatment Plant while the City of Los Angeles treats wastewater from Bell Canyon. The balance of the wastewater treated at the Tapia Wastewater Treatment Plant is from Las Virgenes Sanitation District in Los Angeles County.

Figure 4.4.9 (Continued)

EXISTING CAPACITY AND PROJECTED FLOW FOR SEWAGE TREATMENT PLANTS TO YEAR 2010

(All Figures in 1,000 Gallons Per Day)

Sanitation District	Future Expansion Plans
Camarillo Sanitary District	There are no current expansion plans for this plant.
Camrosa County Water District	There are no current expansion plans but the plant will have to either expand or utilize a portion of the Camarillo Sanitary District Water Reclamation Plant capacity.
CSA NO. 30 (Nyeland Acres)	There are no current expansion plans for this plant.
County Waterworks District No. 1 (Moorpark)	Expansion to 3,000 gallon capacity will occur in 1990-91. There are no No. 1 (Moorpark) current expansion plans beyond this total.
County Waterworks District No. 16 (Piru)	There are no current expansion plans for this plant.
Fillmore Sanitary District	Work is in progress to expand the facility to 2,200 gallons.
Montalvo Municipal Improvement District	There are no expansion plans at this time.
Ojai Valley Sanitary District	There is sufficient capacity until the year 2000, but possibly this plant will need to expand between the year 2000-2005.
Oxnard Sewer District	The City of Oxnard Wastewater Treatment Facility is being expanded, (the facility will have a design capacity of 31,700 with ultimate expansion to 39,600 gallons).
Santa Paula Sanitary District	The City of Santa Paula plans to expand their plant to 2,650 gallon capacity in 1995 and to 2,750 gallons in 2005. These expansions can be done earlier if flow demand warrants. A major expansion project will be needed about the year 2010.

Figure 4.4.9 (Continued)

EXISTING CAPACITY AND PROJECTED FLOW FOR SEWAGE TREATMENT PLANTS TO YEAR 2010

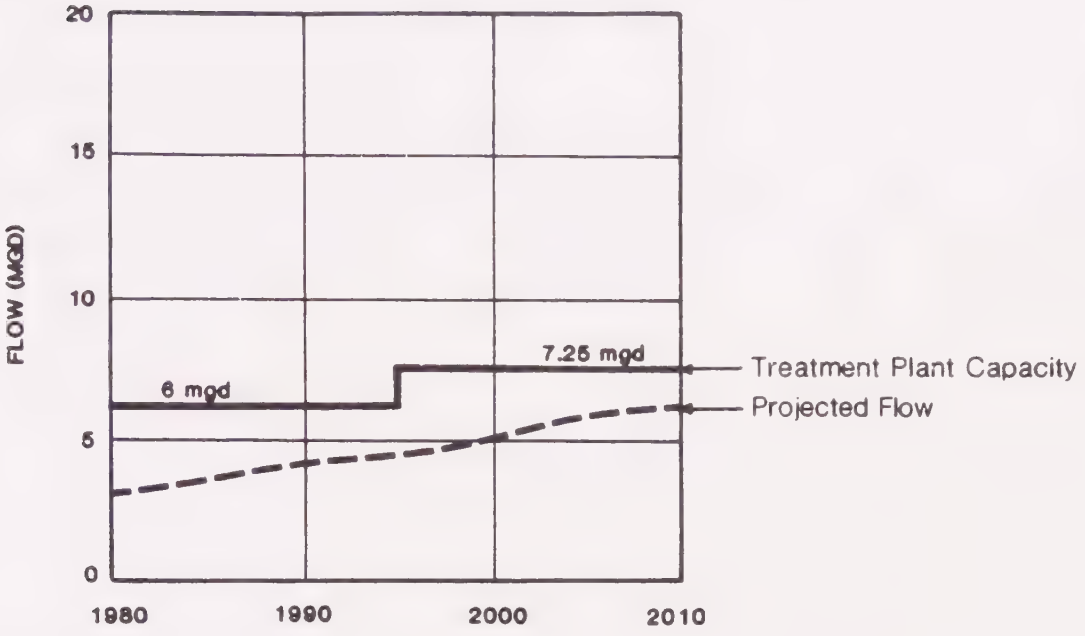
(All Figures in 1,000 Gallons Per Day)

Sanitation District	Future Expansion Plans
Saticoy Sanitary District	The Saticoy Sanitary District Wastewater Treatment Plant will reach capacity between 2010 and 2020. It has several options including expansion at the site, conversion to different types of treatment process or connection to the City of Ventura Waste Water Reclamation facility.
Simi Valley County Sanitary	This plant is under current expansion to 12,600 gallon capacity, with ultimate expansion to 17,500 gallons.
Thousand Oaks Municipal Sanitary District No. 1 a. Hill Canyon Plant	This plant is currently under expansion and its capacity will increase to 10,800 gallon capacity, with ultimate expansion to 14,000 gallons.
b. Olsen Road Plant	There are no current expansion plans for this plant.
*Triunfo County Sanitary District (Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon)	This plant is under current expansion to 10,000 gallon capacity and 16,000 gallons ultimately.
Ventura Sanitary District	There are no immediate expansion plans but the City of Ventura will need to consider expansion of this facility before the year 2010.

Source: Ventura County Planning Division, 1987

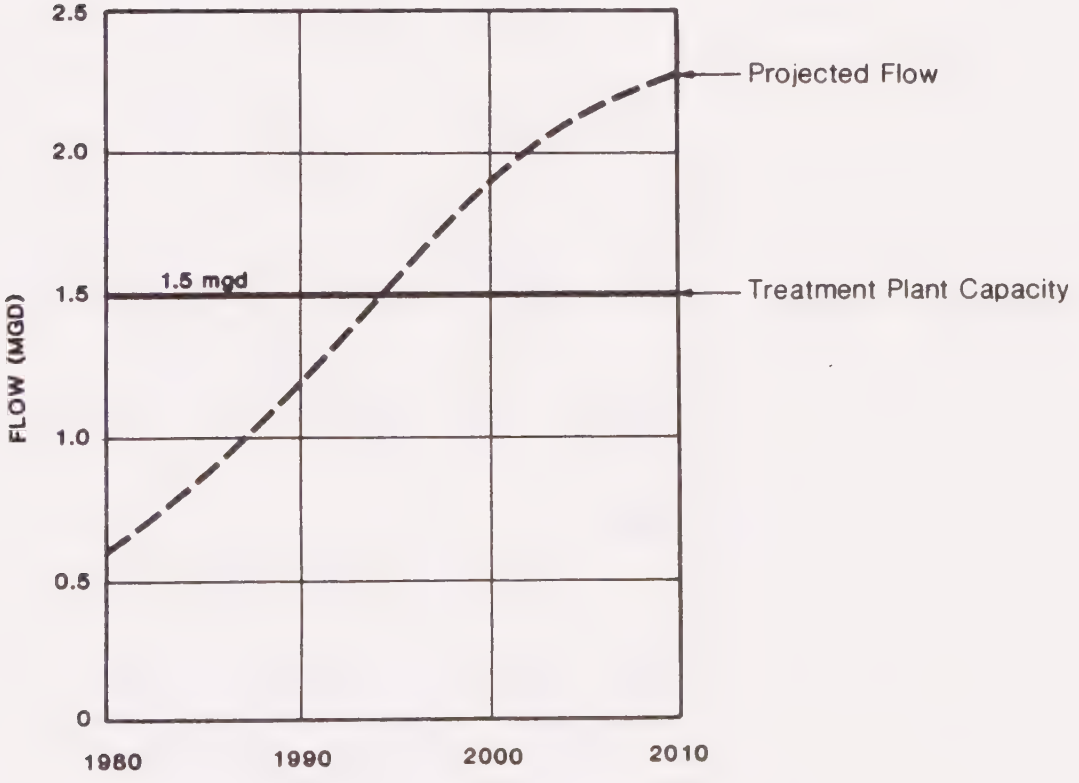
*NOTE: Information shown is for the Triunfo County Sanitation District portion of the Tapia Wastewater Treatment Plant located in Los Angeles County. The project flow of the Triunfo County Sanitation District includes Oak Park, North Ranch, Westlake, Lake Sherwood and Bell Canyon. The wastewater from Oak Park, North Ranch, Lake Sherwood and Westlake is treated at the Tapia Wastewater Treatment Plant while the City of Los Angeles treats wastewater from Bell Canyon. The balance of the wastewater treated at the Tapia Wastewater Treatment Plant is from Las Virgenes Sanitation District in Los Angeles County.

SEWAGE TREATMENT PLANT STAGING



CAMARILLO SANITARY DISTRICT WATER RECLAMATION PLANT

FIGURE 4.4.10

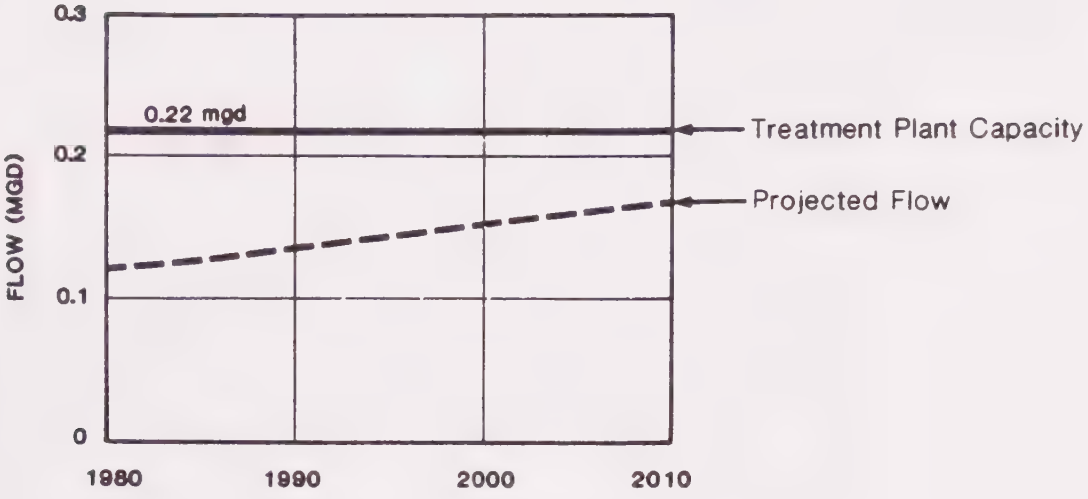


CAMROSA WASTEWATER TREATMENT PLANT
(CAMROSA COUNTY WATER DISTRICT)

FIGURE 4.4.11

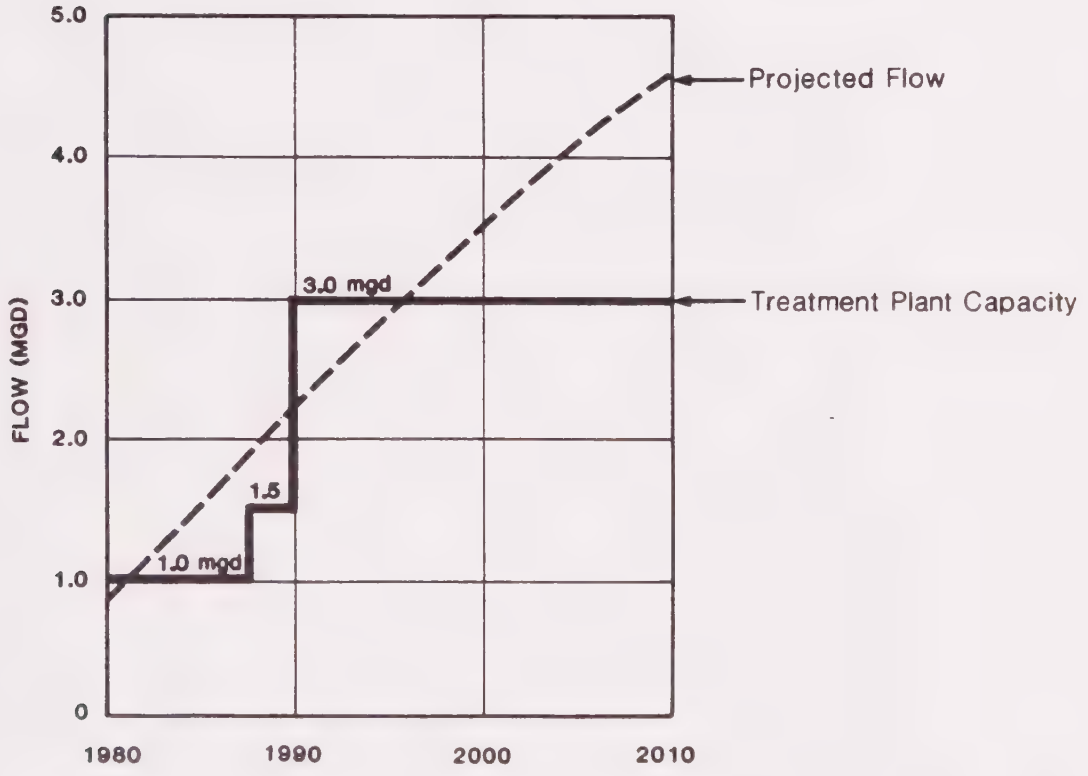
SOURCE: VENTURA COUNTY PLANNING DIVISION, 1987

SEWAGE TREATMENT PLANT STAGING



NYELAND ACRES WASTEWATER TREATMENT PLANT
(COUNTY SERVICE AREA NO. 30)

FIGURE 4.4.12

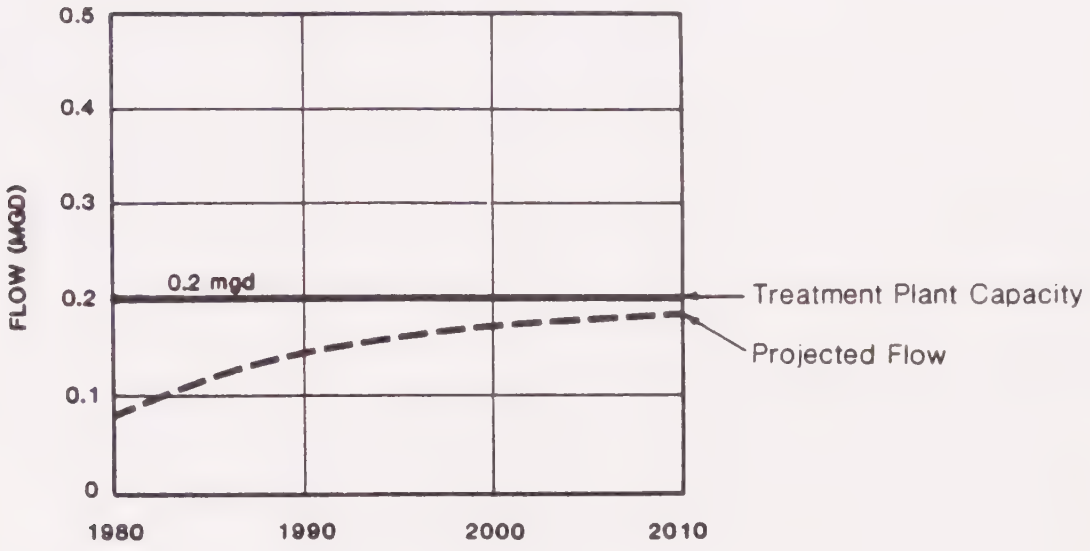


MOORPARK WASTEWATER TREATMENT PLANT
(COUNTY WATERWORKS DISTRICT NO. 1)

FIGURE 4.4.13

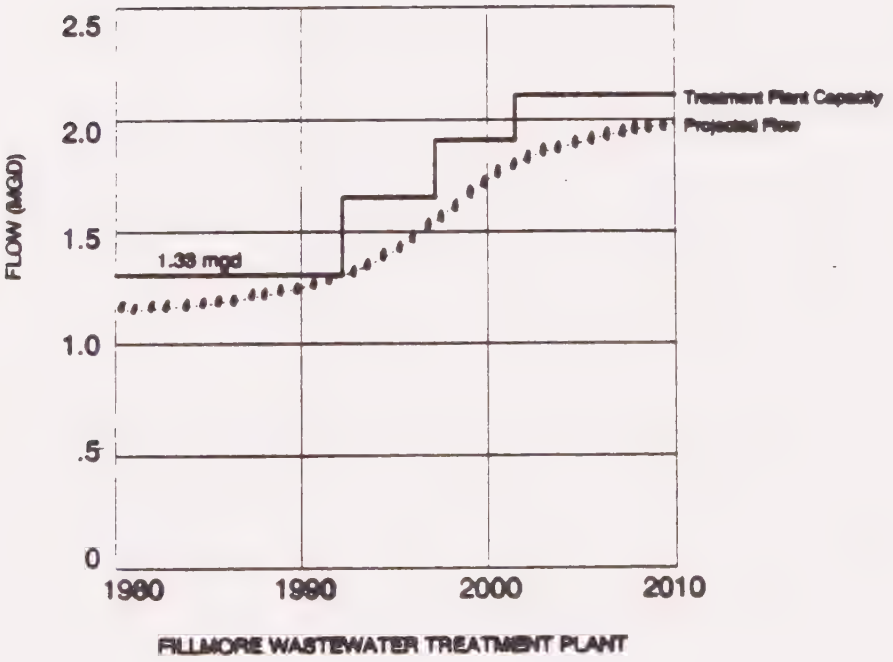
SOURCE: VENTURA COUNTY PLANNING DIVISION, 1987

SEWAGE TREATMENT PLANT STAGING



PIRU WASTEWATER TREATMENT PLANT
(COUNTY WATERWORKS DISTRICT NO. 16)

FIGURE 4.4.14

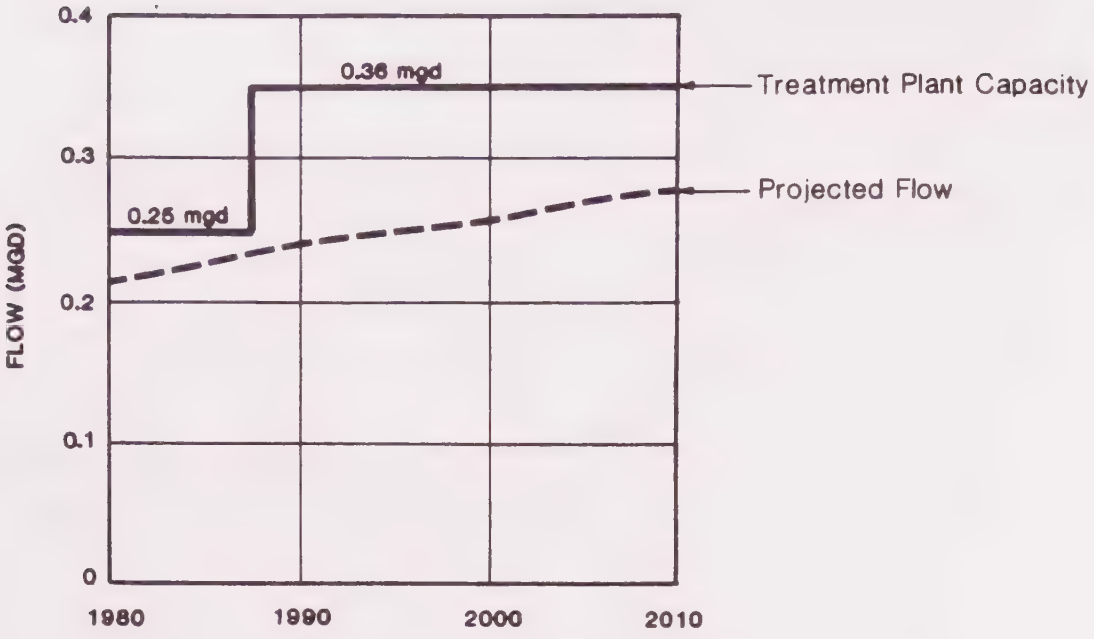


(FILLMORE SANITARY DISTRICT)

FIGURE 4.4.15
R.12/10/91

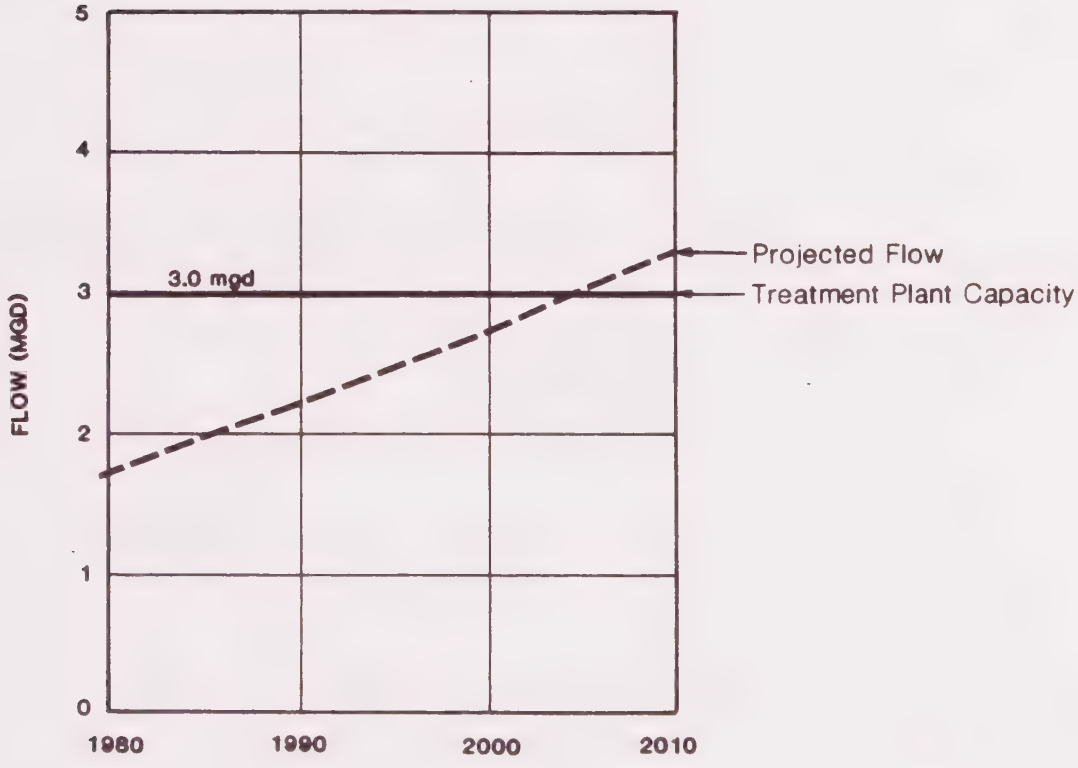
SOURCE: VENTURA COUNTY PLANNING DIVISION, 1987

SEWAGE TREATMENT PLANT STAGING



MONTALVO MUNICIPAL IMPROVEMENT DISTRICT
TREATMENT FACILITY

FIGURE 4.4.16

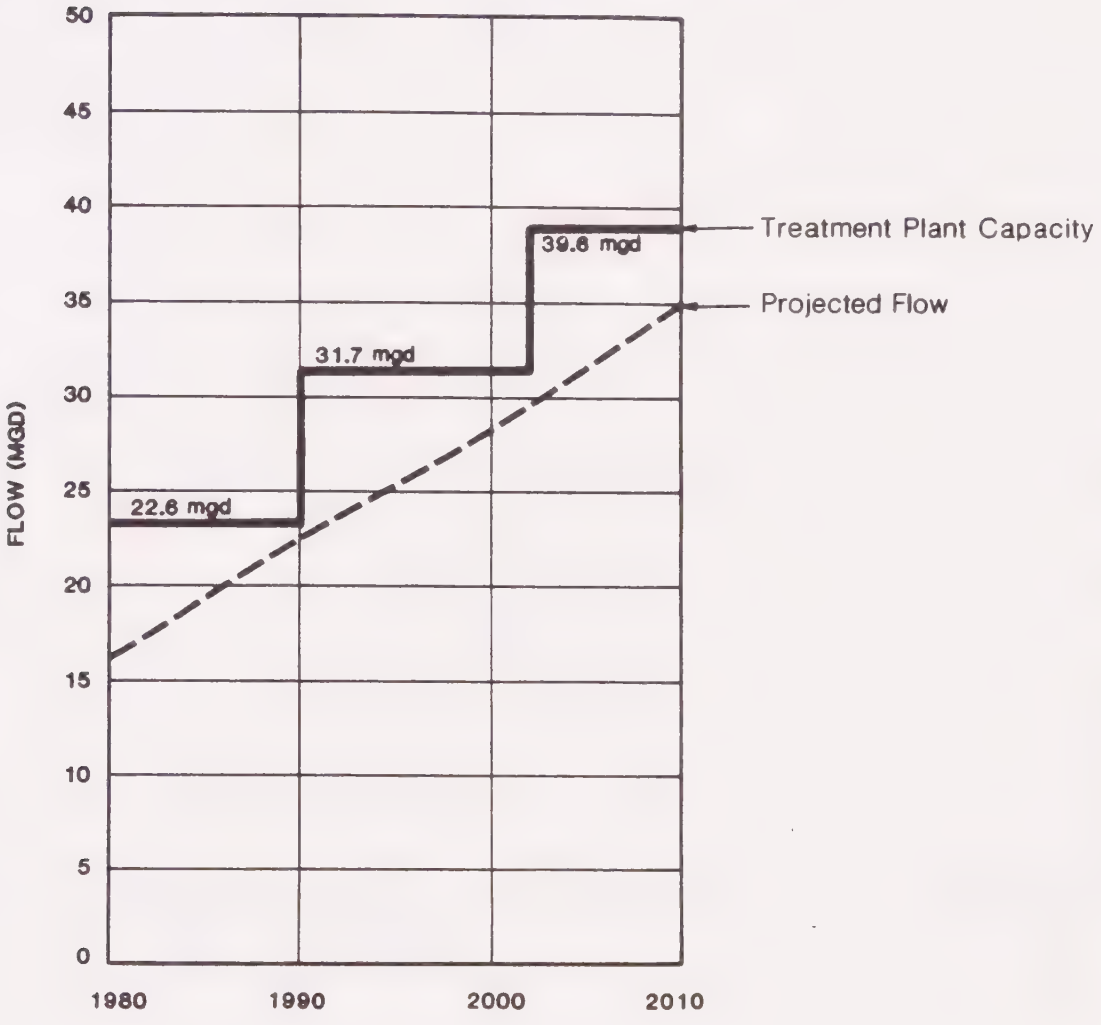


OJAÍ VALLEY SANITARY DISTRICT WASTEWATER
TREATMENT PLANT

FIGURE 4.4.17

SOURCE: VENTURA COUNTY PLANNING DIVISION, 1987

SEWAGE TREATMENT PLANT STAGING

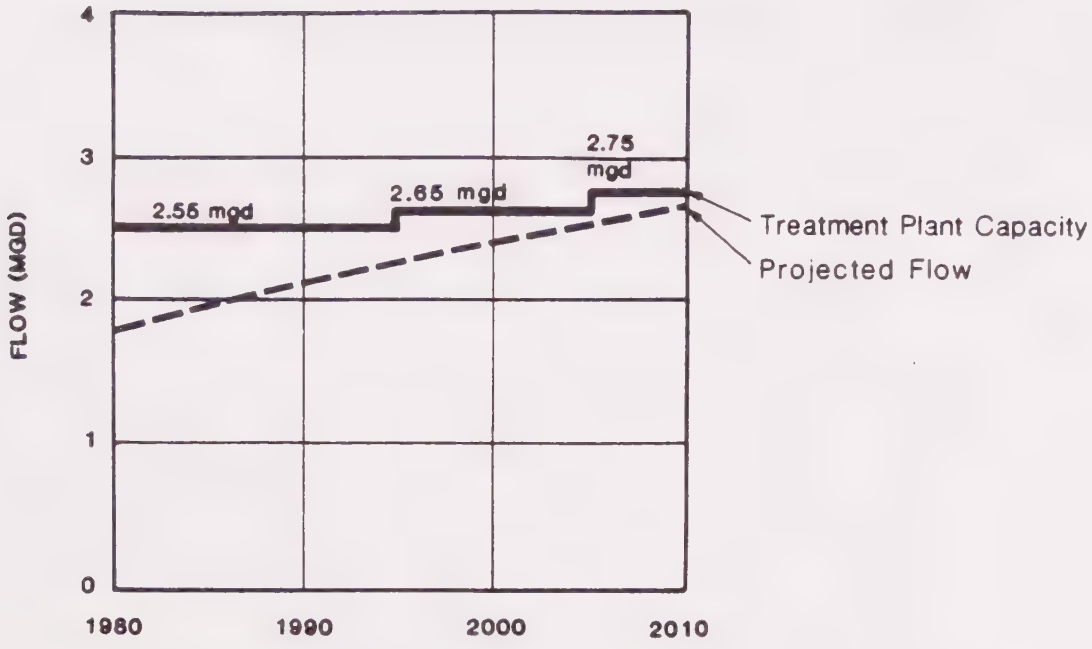


CITY OF OXNARD WASTEWATER TREATMENT FACILITY
(OXNARD SEWER DISTRICT INCLUDES PORT HUENEME)

FIGURE 4.4.18

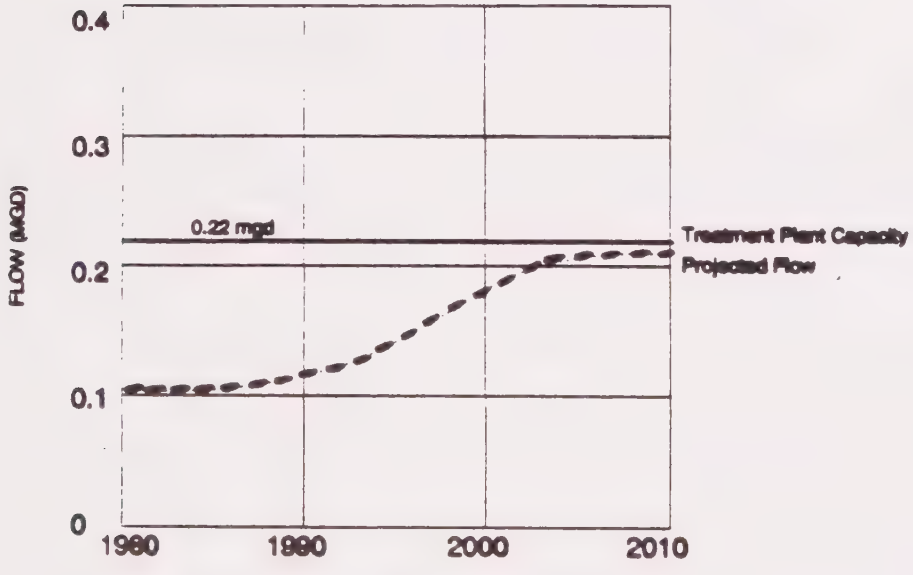
SOURCE: VENTURA COUNTY PLANNING DIVISION, 1987

SEWAGE TREATMENT PLANT STAGING



CITY OF SANTA PAULA WASTEWATER TREATMENT PLANT
(SANTA PAULA SANITARY DISTRICT)

FIGURE 4.4.19



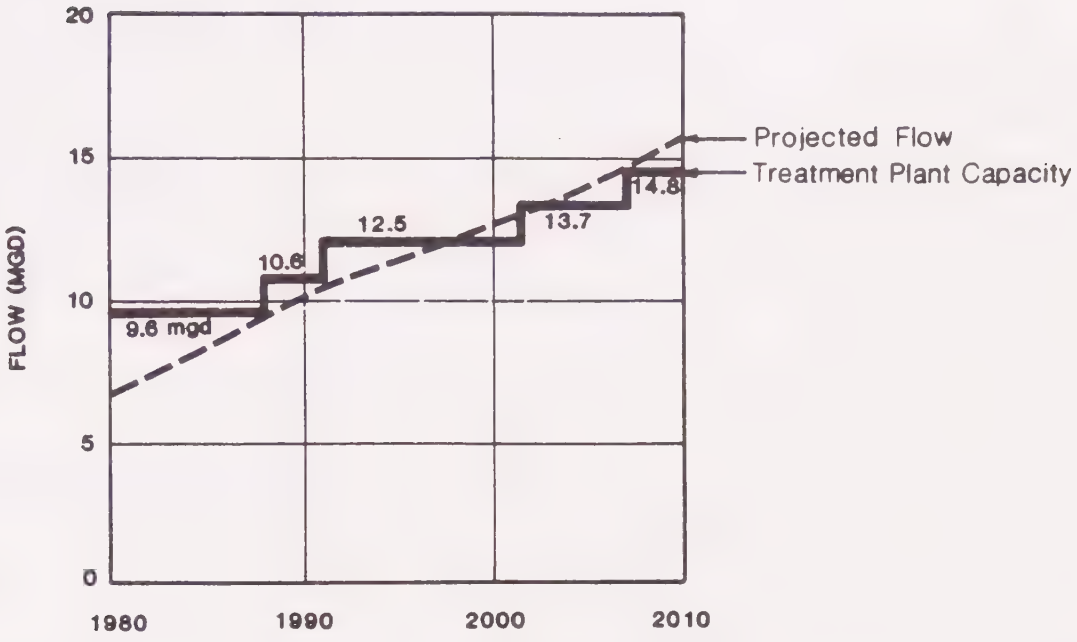
SATICOY SANITARY DISTRICT WASTEWATER
TREATMENT PLANT

Figure 4.4.20

R.12/10/91

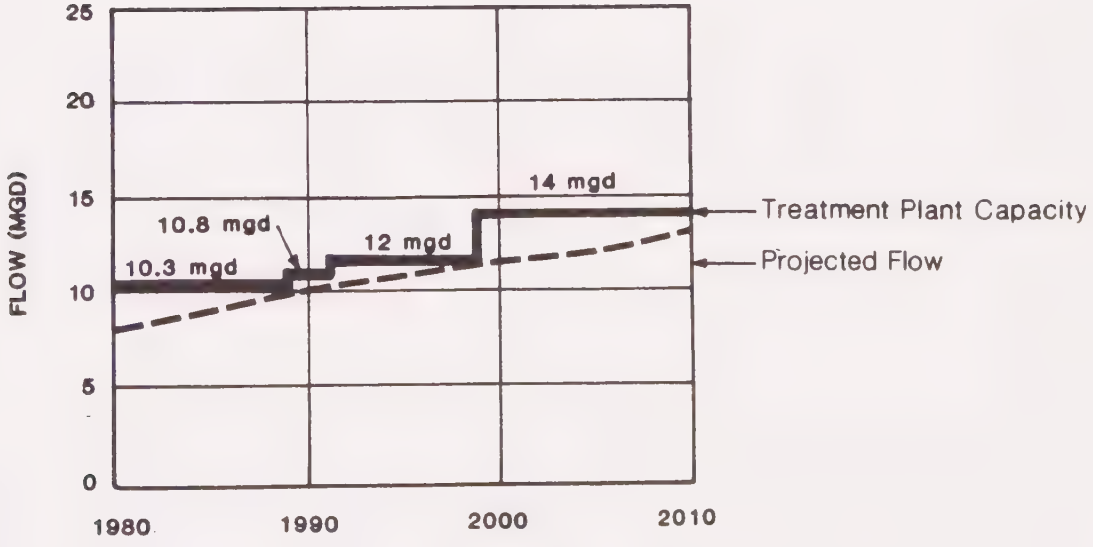
SOURCE: VENTURA COUNTY PLANNING DIVISION, 1987

SEWAGE TREATMENT PLANT STAGING



SIMI VALLEY COUNTY SANITATION DISTRICT
WATER QUALITY CONTROL PLANT

FIGURE 4.4.21

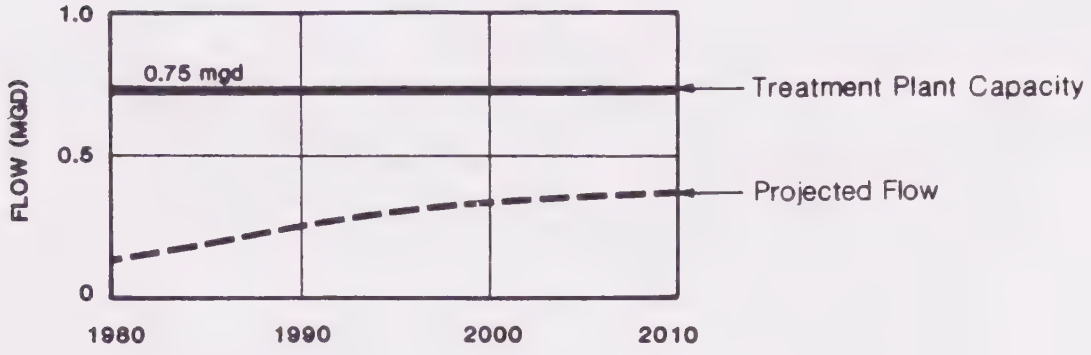


CITY OF THOUSAND OAKS-HILL CANYON WASTEWATER TREATMENT PLANT
THOUSAND OAKS MUNICIPAL SEWER DISTRICT NO. 1

FIGURE 4.4.22

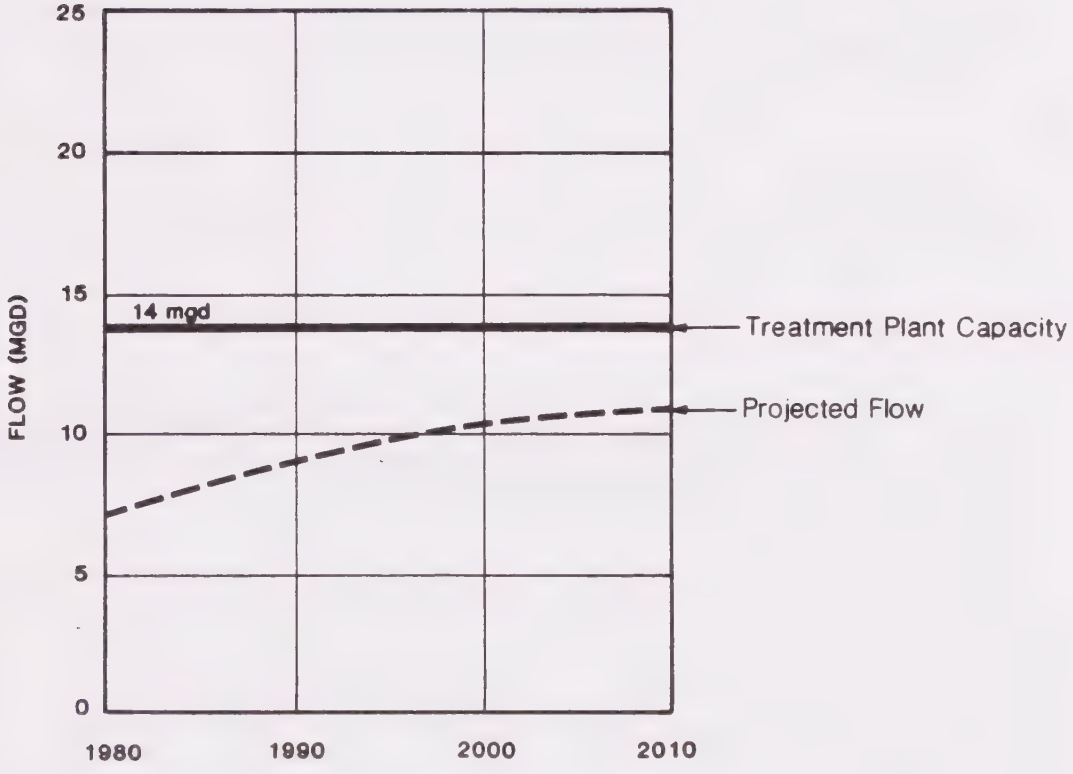
SOURCE: VENTURA COUNTY PLANNING DIVISION, 1987

SEWAGE TREATMENT PLANT STAGING



CITY OF THOUSAND OAKS-OLSEN ROAD WATER RECLAMATION PLANT
(THOUSAND OAKS MUNICIPAL SEWER DISTRICT NO. 1)

FIGURE 4.4.23

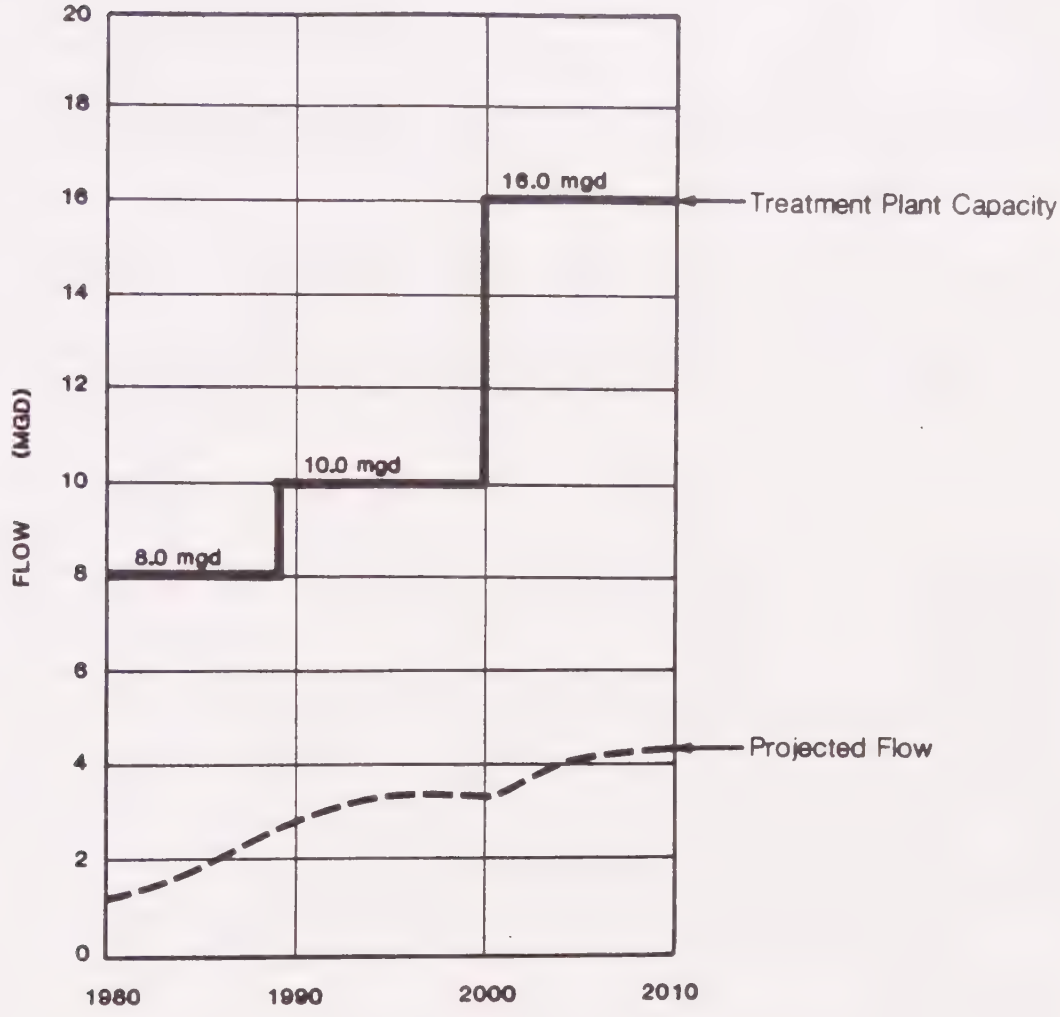


VENTURA WATER RENOVATION FACILITY
(VENTURA SANITARY DISTRICT)

FIGURE 4.4.24

SOURCE: VENTURA COUNTY PLANNING DIVISION, 1987

SEWAGE TREATMENT PLANT STAGING



TRIUNFO COUNTY SANITATION DISTRICT

(FOR OAK PARK, NORTH RANCH, WESTLAKE AND BELL CANYON)

SOURCE: VENTURA COUNTY PLANNING DIVISION, 1987

FIGURE 4.4.25

NOTE: Projected flow shown is for the wastewater from the Triunfo County Sanitation District, which includes Oak Park, North Ranch, Westlake and Bell Canyon. Total treatment plant capacity is shown for the Tapia Wastewater Treatment Plant located at Calabasas in Los Angeles County. The Tapia Wastewater Treatment Plant also treats wastewater from the Las Virgenes Sanitation District located in Los Angeles County. Wastewater from Oak Park, North Ranch and Westlake is treated at the Tapia Wastewater Treatment Plant while the City of Los Angeles treats the wastewater from Bell Canyon. Capacity in 1980 was 4.0 mgd for treatment of solids and 8.0 mgd for wastewater treatment. In 1984 improvements were made to the plant to treat both water and solids at the 8.0 mgd capacity.

4.5 PUBLIC UTILITIES

Electrical power, natural gas, telephone, cable television service and communications equipment are included in the Public Utilities Section.

4.5.1 ELECTRICAL POWER

Ventura County is served by the Southern California Edison Company, which owns and operates generation plants, substations and transmission lines.

Figure 4.5.1 shows a map of the Public Utilities (Electrical Power and Natural Gas) in Ventura County. The major users of electrical energy based on each of the major sectors as noted in the 1989 Annual Report from Southern California Edison Company is as follows:

Residential	33%
Commercial	36%
Industrial	18%
Public Authority (Street Lighting)	9%
Resale	1%
Agriculture	2%
Other	1%
total	100%

The Southern California Edison Company estimates monthly consumption of 520 kwh per dwelling unit.

According to Southern California Edison Company, no single geographic area is planned autonomously, but rather as part of the total system. This approach results in a more reliable, economical, and operationally flexible electrical system, which enables the customers to receive high quality service at a reasonable rate.

Electrical facilities include generation plants, transmission substations and transmission lines which are discussed below.

4.5.1.1 Generation Plants

Southern California Edison presently operates two major sources of generation in Ventura County (Mandalay and Ormond Beach), both of which are located along the Coastal Area of the City of Oxnard. The Mandalay facility is located in "west" Oxnard while the Ormond Beach facility is located in "south" Oxnard.

Both of these facilities are conventional oil-gas fuel types and are located within the coastal zone on the Oxnard Plain. The total generating capacity of these two power plants is 2,010 megawatts (MW) which is equivalent to approximately 12 percent of the total generating capacity of the SCE system serving 14 other Central and Southern California counties as of January, 1987. The amount of electricity produced by the two existing generating facilities in Ventura County is more than the total electrical requirements of the County.

The Mandalay Beach generating station consists of three units with a total generating capacity of 555 MW. The first two units are conventional oil-gas units, rated at 215 MW each, which began operation in 1959. The third unit is a 121 MW gas combustion turbine which began operation in 1970.

The Ormond Beach generating station consists of two conventional oil-gas units with a total generating capacity of 1,500 MW. The first unit began operation in December, 1971 and the second unit began operation in June, 1973. Both units are rated at 750 MW each but are currently operating at levels of approximately 700 MW, in order to comply with applicable APCD NO_x emission rate prohibitions.

4.5.1.2 Transmission Substations

There are two 220-66 kV source substations within Ventura County: Moorpark at 5027 Gabbert and the Santa Clara substation located in Ventura at 10351 E. Foothill Road. These stations provide 66 kV electric power to the majority of the distribution substations in the County for serving the local loads of the area. Saugus 220-66 kV substation, which is located in Los Angeles County, also serves several 66 kV stations that are within Ventura County.

The name, location and general service area for the 66 kV distribution substations are listed in Figure 4.5.2.

Future improvement projects for the 1987-1991 period involve both the Santa Clara and Moorpark substations and their related line projects. Completion of these projects will be necessary to keep up with the electrical energy demand requirements for Ventura County. A new 66-16kV dual substation to be referred to as the Grimes Substation is expected to be on line in 1992 and will be located at Campus Drive in Moorpark and serve the East Moorpark Area. The electric load growth of the remaining areas in the County will be served from the existing substations by increasing their capacity as required.

The 66-16 kV substations provide a source for distribution lines and the smaller 16-4 kV substations. The name, location and general service area for these stations are listed below in Figure 4.5.3.

4.5.1.3 Transmission Lines

The electric power is distributed to individual customers from the substations through distribution lines operating at 16 kV or 4 kV.

These lines are normally extended underground from the substations and integrated with the existing distribution network of the area. During the coming years, it will be necessary to construct additional distribution lines from the different substations to meet the load requirements of the area. In addition, there will be a need to increase the length of many of the existing distribution lines to serve the remaining loads.

4.5.2 NATURAL GAS

Southern California Gas Company supplies natural gas to all of Ventura County through a fixed transmission and distribution system.

The Southern California Gas Company, North Coastal Division serves all the Cities within the County as well as unincorporated portions of the County. The headquarters of the North Coastal Division are located at 130 Patterson Avenue in Santa Barbara. The Ventura County company office is located at 324 South B Street in Oxnard.

There are approximately 1,118 miles of supply lines and distribution mains in the County. The number of connected meters in Ventura County is about 190,079.

The breakdown of gas usage by percentage for major sectors for Ventura County during 1989 is as follows:

Residential	18.54%
Commercial (including agriculture)	8.61%
Industrial	11.13%
Electric Generation	61.72%
total	100%

For 1990, the Southern California Gas Company estimates the average consumption per household per month will be 53 therms. Southern California Gas Company officials from the North Coastal Division indicated they have adequate supplies and facilities to serve Ventura County to the year 2010.

4.5.3 TELEPHONE SERVICE

Telephone service is provided by Pacific Bell and GTE California, Inc. Communities served by Pacific Bell include Fillmore, Moorpark, Ojai, Simi Valley, and Ventura; plus the unincorporated areas of Oak View, Piru and Saticoy.

GTE's Western Regional Headquarters is located in Thousand Oaks, serving a twenty county area with more than 330 communities. GTE provides phone service to the cities of Camarillo, Oxnard, Port Hueneme, Santa Paula and Thousand Oaks; plus the unincorporated areas of Newbury Park, Somis and Westlake.

4.5.4 CABLE TELEVISION SERVICE

Seven cable companies currently offer the residents of Ventura County a number of choices for their viewing pleasure. A description of each cable television company and the areas they serve follows:

- Avenue Cable serves west Ventura and a portion of the Central City area and a strip of hillside homes in the foothills.
- Comcast Cablevision of Simi Valley serves the entire City of Simi Valley.
- Falcon Cable serves a portion of Thousand Oaks and the South Coast Solromor area.
- Jones Intercable serves Oxnard, El Rio, Port Hueneme and surrounding beach areas.
- Mountain Meadows Cable Television serves the Mountain Meadows Planned Community portion of Moorpark.
- Ventura County Cablevision serves Fillmore, Ojai, the Ojai Valley, Somis, the Santa Rosa Valley, Oxnard, Piru, Camarillo, Moorpark, Newbury Park, Santa Paula, Thousand Oaks and Westlake Village.

4.5.5 COMMUNICATIONS EQUIPMENT

County communications equipment, operated by the Information Systems Department, includes radio, microwave, and telephone switching equipment, which is located at 17 separate sites, including each of the three community colleges. In addition, there are other governmental and privately operated communications equipment facilities (including radio and television transmitting and receiving antennas, radar stations and microwave towers) scattered throughout the County's hilltops. These

facilities are located on the following peaks: Hall Mountain (north of Ventura), Rasnow Peak (south of Newbury Park), Red Mountain (south of Lake Casitas), South Mountain (southeast of Santa Paula), Sulphur Mountain (south of Ojai), Santa Susana Peak (Rocketdyne), and other peaks in the Santa Monica Mountains. The U.S. Navy maintains communications equipment on Mugu Peak.

4.5.6 CONCLUSIONS

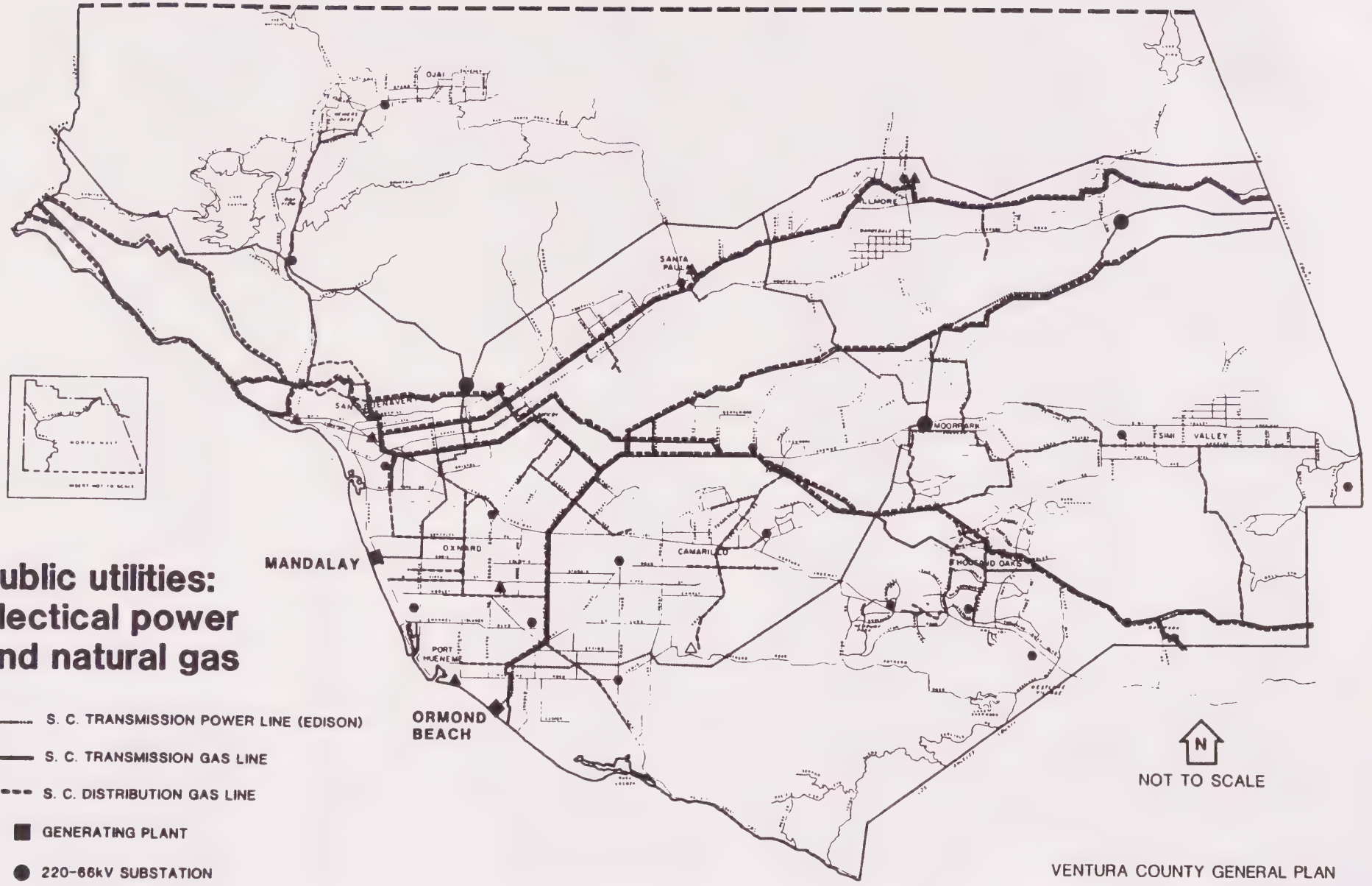
The public utilities discussed above represent a vital part of the urban infrastructure necessary for properly planned land use. Issues which warrant consideration in the Goals, Policies, and Program Chapter of the General Plan include guidance on the placement of utility facilities. The goals and policies will enable the County to have a stronger role in the location of future utility facilities and serve as notice and recommendation to the California Public Utilities Commission of the County's position.

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public utilities: electical power and natural gas

S. C. TRANSMISSION POWER LINE (EDISON)

S. C. TRANSMISSION GAS LINE

S. C. DISTRIBUTION GAS LINE

GENERATING PLANT

220-66kV SUBSTATION

66kV DIST. SUBSTATION

16-4kV DIST. SUBSTATION

SOURCE: SOUTHERN CALIF. EDISON AND SOUTHERN CALIF. GAS COMPANY

DATE: SEPTEMBER 1987

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.5.1

FIGURE 4.5.2 66 kV DISTRIBUTION SUBSTATIONS

Name	Location	General Service Area
Camarillo	Adolfo Road, West of Santa Rosa Road	City of Camarillo
Casitas	Highway 33, South Edge Casitas Springs	Community of Casitas Springs
Channel Islands	Corner of Hemlock and Victoria Streets	Port Hueneme and southwest section of City of Oxnard
Chatsworth	Northrop Corporation Property, Santa Susana Hills	Northrop Corporation facilities and surrounding area
Colonia	Pleasant Valley and Wood Road, five miles east of Oxnard	City of Camarillo, northeast section of City of Oxnard
Estero	Southeast corner of Wood Road and Hueneme Road	Point Mugu U.S. Naval Air Station Test Grounds and adjacent area
Fillmore	Southwest corner of Fifth and "A" Streets (Dual facility - also a 16-4kV substation at same location)	City of Fillmore
Gonzales	Northeast of Oxnard Blvd. and Vineyard Avenue	North and northwest section of City of Oxnard
Levi	Highway 101 and Demessy Road, Hueneme	Port of Hueneme and southern section of City of Oxnard
Moorpark	Los Angeles Avenue and Gabbert Road	City of Moorpark and adjacent area
Newbury	Lawrence Drive, north of Ventura Freeway	Community of Newbury Park
Oak Park	Lindero Canyon and Kanan Road	North Thousand Oaks
Ojai	403 Willow Street	City of Ojai
Potrero	East of Hampshire Road on Townsgate Road	City of Thousand Oaks/Westlake Village
Royal	First Avenue and Cochran Street	West section of Simi Valley
San Miguel	Transport Street, east of Callens Road, Ventura	Southwest section of City of Ventura
Santa Susana	Cochran Street and Tapo Road	East section of Simi Valley
Saticoy	10995 Foothill Road, Saticoy Avenue	Community of Saticoy and east section of community of Camarillo
Somis	Bradley Road and Los Angeles Avenue	Community of Somis, northeast section of community of Camarillo
Thousand Oaks	Wilbur Road east of Moorpark Road, Thousand Oaks	City of Thousand Oaks
Wakefield	East side of 12th Street, north of Main Street, Santa Paula	City of Santa Paula

FIGURE 4.5.3 16-4 kV SUBSTATIONS

Name	Location	General Service Area
Camar	Camarillo State Hospital grounds	Camarillo State Hospital
Fillmore	Southwest Corner of Fifth and "A" Street (Dual facility - also 66kV substation at same location)	City of Fillmore
Hueneme	Third and Main Street	Port Hueneme
Oxnard	Fifth Street east of Factory Lane	Portion of City of Oxnard
Pierpont	Northwest corner of Telegraph Road and Mills Road	North Central section of City of Ventura
Santa Paula	1343 East Main Street	Southeast section of the City of Santa Paula
Ventura	Intersection of Santa Clara Street and Ventura Avenue	Western section of City of Ventura

4.6 FLOOD CONTROL AND DRAINAGE FACILITIES

A description of the Ventura County Flood Control District and its flood control facilities are included in this section.

4.6.1 VENTURA COUNTY FLOOD CONTROL DISTRICT

The Ventura County Flood Control District is a special district that was created by Act 8955 (Ventura County Flood Control Act) of the State Legislature in 1944 for the purpose of providing for the control of floods and storm waters originating within the District (County) or originating outside the District and flowing into it, to conserve such waters for beneficial use, to prevent waste or exportation of waters and to reclaim drainage, storm, and flood waters. The District includes all of Ventura County except the offshore Channel Islands of Anacapa and San Nicolas. The County is divided into four numbered flood zones: Zones 1-4. Boundaries of the first three zones generally follow the limits of the three major drainage systems of Ventura County, and Zone 4 includes the Cuyama River Basin and the remainder of the County. These zones are further described below:

Zone 1 - Ventura River Watershed: Includes Ojai Valley, Matilija Area and West Ventura.

Zone 2 - Santa Clara River Watershed: Includes East Ventura, El Rio, Fillmore, Oxnard, Piru, Port Hueneme and Santa Paula.

Zone 3 - Calleguas Creek Watershed: Includes Camarillo, Newbury Park, Point Mugu, Santa Susana, Simi Valley, Somis and Thousand Oaks.

Zone 4 - Cuyama River Basin and Remainder of the County: This zone includes the part of Cuyama River Basin which lies within the northwestern part of the County, a small separated area in the northeast portion of the County plus the separated drainage area south of Simi Hills tributary to Malibu Creek in the southeastern part of the County, and the coastal drainage area on the south slope of the Santa Monica Mountains in the southern part of the County.

The County Flood Control District was created to conserve water resources as well as to control floods and storm waters, and to protect watercourses, watersheds, public highways, life and property from damage by these waters. Those facilities whose primary purposes are conservation of water, such as reservoirs and spreading grounds, are now largely carried on in various parts of the County by local public agencies among which are Casitas Municipal Water District, United Water Conservation District and Calleguas Municipal Water District.

The powers of the Ventura County Flood Control District are broad when they are related to the purposes of the Ventura County Flood Control Act. It has the power of perpetual succession; to sue and be sued; to acquire, hold and sell property both real and personal; the power of eminent domain and entry upon land; to employ civil engineers; to conduct technical and other investigations; to incur indebtedness; to issue bonds; to tax and assess; to make contracts; and to employ labor.

In addition to the Ventura County Flood Control District, several other agencies responsible for providing drainage of storm waters from, or conveyance of storm waters through the County include: (a) the various cities; (b) drainage and storm drain districts, and (c) Ventura County itself.

The policy adopted by the County Board of Supervisors and Flood Control Board of Supervisors, dated December 26, 1966, has established the criteria for determining the division of responsibility for flood control and storm drainage works among Ventura County Flood Control District and local agencies. These criteria state that projects for construction of such works as storm drainage catch basins, laterals and sub-laterals, designed to prevent inconvenience and minor damage and to control water flowing overland in undefined channels, shall be accomplished by some form of local district; while such works as dams, debris basins, stream revetments, storm water collecting conduits, levees, channel improvements and watershed protection, which prevent major damage and loss of life, and which control water flowing in rivers or streams, are the responsibility of Ventura County Flood Control District.

Responsibilities of the Ventura County Public Works Agency through their policy, dated July 15, 1958, sets forth requirements concerning disposal of drainage and storm waters before approval of new subdivisions can be obtained. It requires subdividers to dispose of drainage water originating within and above their subdivisions that is concentrated by the construction of the subdivision by: (1) conducting the water to the natural water course draining the subdivision; or (2) discharging the water at the edge of their subdivisions and obtaining easements from downstream owners of the land over which the water will flow to the water course. Subdividers are required to construct the above works and such other works as will protect their subdivisions from damage by water and dedicate them to the County or Flood Control District for **red line channels.**

Factors considered in determining those channels for which maintenance, operations, acquisition of rights-of-way and construction of flood protection works are to be included under Flood Control District jurisdiction include: (a) magnitude of flood flows; (b) character of the watershed such as its slope and debris production; (c) character of the channel such as its slope, erodibility and stability; (d) effect of upstream works in modifying flood flows, erosion or deposition; and (e) probable ultimate land use; and (f) fiscal effects.

The Ventura County Flood Control District defines **red line channels** as channels over which the Flood Control District exercises regulatory jurisdiction. Regulatory jurisdiction does not imply ownership, as some of the red line channels are owned by the Flood Control District and some are owned by others. These red line channels can either be improved or unimproved.

4.6.2 FLOOD CONTROL DISTRICT FACILITIES

There are a total of 486.46 miles of channels under County Flood Control Regulatory Jurisdiction. Refer to Figure 4.6.1a and 4.6.1b for a map of both the North Half and South Half of Ventura County showing Ventura County Flood Control District red line channels.

These totals are as follows:

Zone 1	72.12 miles
Zone 2	181.23 miles
Zones 2 & 3	57.23 miles
Zone 3	149.69 miles
Zone 4	26.19 miles
total	486.46 miles

The County Flood Control channels run the gamut from fully improved concrete channels to unimproved, natural channels. Fully improved channels include: rectangular, trapezoidal, box and pipe. Other channels include natural, shaped (but maintained) and pipe and wire channels.

The staff for the County Flood Control District (VCFCD) is the Flood Control Department of the Public Works Agency. The Flood Control Department plans, designs, constructs and maintains flood control facilities (channels and debris basins) for the Flood Control District governed by the Board of Supervisors (Ex-Officio). Staff also works closely with Advisory Committees established for the three Flood Zones 1 through 3.

Ventura County Flood Control District (VCFCD) facilities include:

- Matilija Dam (Ojai)
- 682 El Rio Road, Oxnard - three Flood Control buildings
- Silver Strand - three pump stations
- Surfside Drive, Port Hueneme - drain pump station (flood control)
- Walnut Canyon Road Area (one mile north of High Street), Moorpark - PWA office, flood control, warehouse/office plus several waterworks buildings.
- In addition, there are many additional Flood Control District facilities and properties including debris dams, channels, basins, barrancas, washes and drop structures throughout the County.

Other Ventura County Flood Control District facilities are maintained for the following District programs:

- Precipitation measurement: VCFCD maintains 98 rainfall stations throughout and near Ventura County. A total of 65 stations are monitored by cooperative observers, while the remaining are operated by hydrographers of the District.
- Evaporation Stations: VCFCD maintains eight evaporation pans at selected rainfall stations.
- Stream gauging: VCFCD operates and maintains 31 streamflow recording stations within the County. In addition to these stations, records are available for the 13 stations owned and operated by the United States Geologic Survey.
- Flood Warning System: Since February 1979, VCFCD has been operating a flood warning system called "ALERT," an acronym for Automated Local Evaluation in Real Time, which was developed by the National Weather Service.

  Basically the flood warning system operation consists of four elements: Self-reporting rain gages at strategic points in the watershed, local flood warning center, the river forecast center and a weather consultant charged with forecasting the amount of rain that can be expected over the next 24 hours along with the maximum six hour amounts.

There are also 15 self reporting stream gages incorporated into the extensive flood warning system. The primary function of these gages is to provide data during storms to help determine if a dangerous flooding situation is developing.

- Water resources facilities include: 368 key groundwater wells which were being monitored for water level change. Of these, 262 are presently monitored by the Department, 58 are monitored by United Water Conservation District (UWCD), 24 are monitored by Casitas Municipal Water District and 24 are monitored by other agencies and individuals. Principal groundwater monitoring and data collection programs performed by the District include water level, water quality, and seawater intrusion. In addition, all new water wells are accurately field located by District personnel, plotted on State well location base maps and assigned State well numbers. In 1985 the Groundwater Section of the Water Resources and Development Services Department started administering the Ventura County Water Well Ordinance which specifies sealing conditions for the construction and destruction of water wells, monitoring wells, engineering test holes and cathodic protection wells in all areas of the County except the City of Thousand Oaks. Permits must be obtained from the Department prior to any of the above work.

The Flood Control Department is also the responsible sponsoring local agency for Federal flood control projects throughout the County. It also provides coordination for the Federal Flood Insurance Program and is coordinating with the Federal Government in studying coastal erosion and control (see Hazards Appendix).

Other functions include coordination of the importation of water into the County, flood fighting and disaster operations, review of land developments for flood hazard, effects on water quality, issuance of Watercourse Permits, and operation of a Flood Warning System.

4.6.3 CONCLUSIONS

Providing necessary flood control and drainage facilities is an important aspect of the County's flood plain management program. The General Plan Goals, Policies and Programs should address issues relating to how the needed flood control facilities should be constructed and what the developers responsibilities should be.

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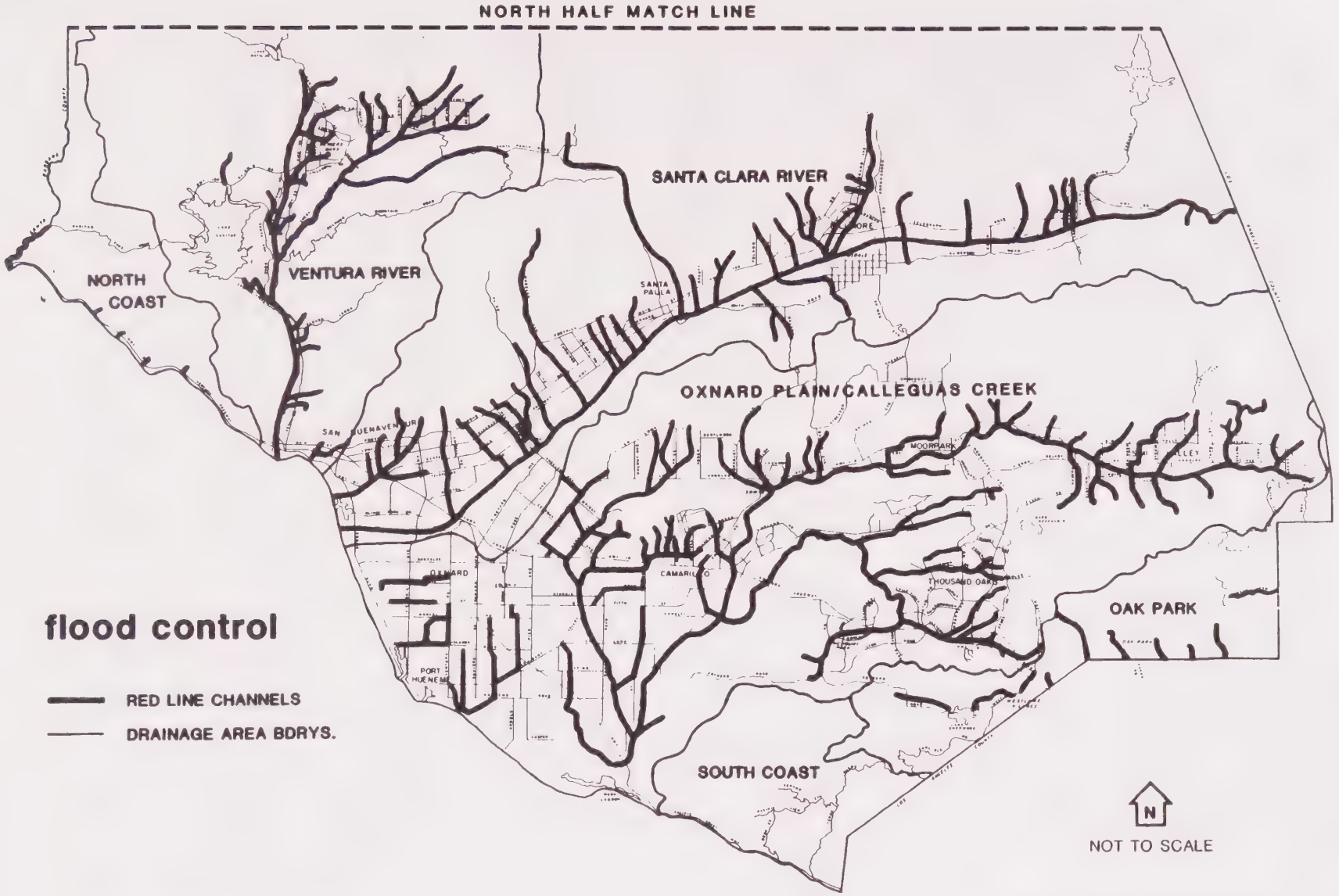
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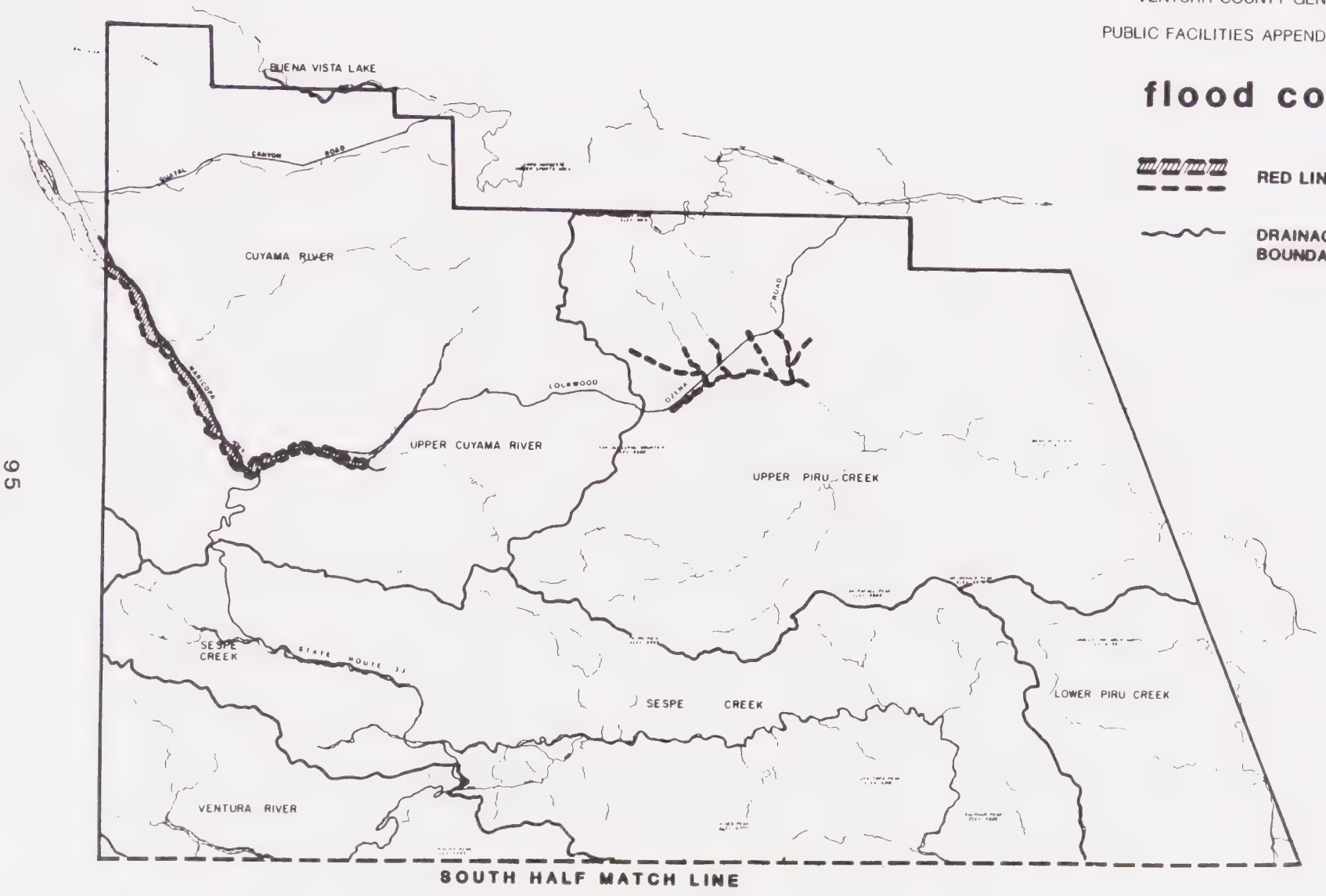
VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX FIGURE 4.6.1a

SOURCE: PUBLIC WORKS AGENCY FLOOD CONTROL
DATE: SEPTEMBER 1987

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.6.1b

flood control



RED LINE CHANNELS

DRAINAGE AREA BOUNDARY

N

NOT TO SCALE

SOURCE: USDA – FOREST SERVICE 1986

4.7 LAW ENFORCEMENT AND EMERGENCY SERVICES

The Sheriff's Department, jail and detention facilities, courts and emergency services are included in this Section.

4.7.1 SHERIFF'S DEPARTMENT

The Sheriff is the Chief Law Enforcement Officer for the County of Ventura and, as such, has jurisdiction over its unincorporated areas. In 1965, the Sheriff, through a contract, began to provide law enforcement services for the Cities of Thousand Oaks and Camarillo. In 1980, the City of Ojai also contracted for law enforcement services. The City of Moorpark became the fourth municipality to contract in July 1984. More recently, the City of Fillmore contracted for police services in June 1987.

The Sheriff is also the keeper of the County jails used for the detention of persons committed for contempt, or upon civil process, and for the detention of pre-sentenced and sentenced persons to imprisonment therein on conviction for a crime. The Sheriff must receive all persons committed to jail by a competent authority. The Sheriff is required to transport and deliver prisoners committed to state prisons to the place of their confinement. He is responsible for the maintenance of the well being of all prisoners within the county jail system.

The Sheriff is an officer of the Superior and Municipal Courts and as such, provides courtroom security with the placement of deputy sheriffs as bailiffs. In conjunction with his/her responsibilities as an officer of the court, the Sheriff provides for the service of both criminal and civil process throughout the county.

The Sheriff is the Director of Emergency Services and during incidents of natural disaster, becomes the coordinator of County and State requested resources. The Director is further responsible for reporting fiscal and management data to the State Office of Emergency Services and the Federal Emergency Management Agency.

To accommodate the responsibilities of the Office of the Sheriff, the department is comprised of seven major divisions: Support Services, West County Patrol, East Valley Patrol, Central County Patrol, Special Services, Custody, and Court Services. The Department is organized so that each division is accountable to the Assistant Sheriff or the Undersheriff.

The Sheriff's Department is headquartered at 800 South Victoria Avenue, Ventura and maintains stations in Camarillo, Fillmore, Lockwood Valley, Moorpark, Ojai, and Thousand Oaks. As of 1987, the Sheriff's Department was staffed by 872 personnel; 552 of whom were sworn officers. (Refer to Figure 4.7 for a map of Public Safety Facilities for the Sheriff's Department).

The remainder of this section on County Law Enforcement describes each of the seven divisions.

4.7.1.1 West County Division

This division is responsible for general law enforcement along the County's coastline to the mountains of Los Padres National Forest. This division works out of four substations that include the contract Cities of Fillmore and Ojai.

The Santa Clara Valley Station, located at 524 Sespe Avenue, Fillmore, serves the contract City of Fillmore and the unincorporated areas surrounding the City of Santa Paula, including the community of Piru, and the remainder of Santa Clara River Valley east to the Los Angeles County Line.

The Lockwood Valley Station, at 15021 Chico Larson Way, Frazier Park, covers a large unincorporated area in the northeast section of the County.

The Ventura Station is part of the Sheriff's Department Complex at the Ventura County Government Center, 800 South Victoria Avenue, Ventura. It serves the unincorporated areas around the Cities of Ventura, Oxnard and Port Hueneme, as well as the communities of Montalvo, Saticoy, El Rio, and the Silver Strand and Hollywood Beach areas. The area extends west of Ventura to the Santa Barbara County Line.

The Ojai Station, located at 402 South Ventura Street in Ojai, is responsible for providing law enforcement services to over 196 square miles, including the contract city of Ojai. The City of Ojai is unique in the area for its Ojai Valley Volunteer Security Patrol, a group of senior citizens actively supporting the community's law enforcement programs.

West County is also the primary station for the Sheriff's Emergency Operations Center (EOC). This radio communications network that includes a computer aided dispatch system. In addition to its law enforcement functions, the dispatch system also handles emergency functions including ambulance dispatching for the entire County and fire dispatching for the City of Fillmore.

The EOC is also the primary reception point for the emergency "911" phone system. Emergency response time has been significantly reduced by simply dialing this three digit number for all emergency services. Finally, the EOC is the central location that connects the county with EOC's throughout the state and coordinates communications and resources in case of disaster or other emergency.

4.7.1.2 East Valley Station

This division serves the contract Cities of Thousand Oaks and Moorpark and surrounding unincorporated areas with complete law enforcement services. The service area extends from the top of the Conejo Grade south to the Los Angeles County Line and totals over 300 square miles. All deputies work out of the East Valley Station located at 2101 East Olsen Road in Thousand Oaks.

Besides housing patrol and investigative services, the East Valley Division also includes a booking and branch jail facility, plus a vehicle maintenance section. The East Valley Division has grown to keep pace with the dynamic area it serves.

The Sheriff's Department provides complete law enforcement services to the City of Thousand Oaks with its population of approximately 100,000 citizens and an area of approximately 50 square miles. The city's crime rate consistently remains in the lowest ten percent for cities in its size category.

In 1983 the City of Moorpark was incorporated, and began receiving contract law enforcement services from the Sheriff's Department in 1984. Its population of approximately 17,000 citizens is provided

a progressive level of law enforcement. Utilization of crime prevention through environmental design plays a major role as Moorpark and the Sheriff's Department continue to grow.

4.7.1.3 Central County Division

The Central County Division provides law enforcement services to the City of Camarillo, the communities of Somis and Nyeland Acres and the remainder of the unincorporated area of the Oxnard Plain, south along the coast to the Los Angeles County line.

The Camarillo Station is located at 67 Palm Avenue in Camarillo and provides a full range of police services to the community. One of the special ways citizens of Camarillo support their Sheriff's personnel is by participating in the Camarillo Citizen's C. B. Patrol Program.

4.7.1.4 Custody Division

The Custody Division is the largest division within the Sheriff's Department both in terms of budget and personnel. It has the responsibility for providing a safe, as well as secure environment for an average daily count of approximately 1,267 inmates. These inmates are housed at two major facilities. The largest inmate population is housed at the Main Jail/Pre-Trial Detention Facility located at the Ventura County Government Center, 800 South Victoria Avenue, Ventura. The remaining inmates are housed at the Ventura County Branch Jail-Honor Farm Facility at 370 West Baldwin Road, Ojai. (Refer to Figure 4.7 for location of these detention facilities).

The Main Jail/Pre-Trial Detention Facility was built in 1978 for a capacity of 438 inmates. In recent years, the capacity was doubled when single-person cells were remodeled to include a second bed. In 1987, the average daily population at this facility was approximately 884.

To meet the needs of an expanded female population, the Medium Security Facility at the Branch Jail-Honor Farm became the primary housing location for female inmates. All female inmates formerly were housed at the Main Jail/Pre-Trial Detention Facility.

The Main Jail/Pre-Trial Detention Facility has a total floor area of over 220,000 square feet and a rated bed space capacity of 884. This facility has the capability of providing a broad range of inmate programs and services and still maintain an acceptable level of security for both inmates and staff personnel. The two housing floors, third and fourth levels, are each divided into four quadrants. These quadrants are subdivided into four housing sections, each of which has the capacity to house 48 inmates. A medical housing section located on the second level has 18 cells. Medical, dental, and psychiatric services are provided by private medical contract personnel. Recreational facilities are located within the quadrants as well as on the roof and include weight machines, basketball, volleyball and handball.

The building is designed with the idea of bringing services to the inmates instead of moving inmates. As a result, a relatively small staff is able to provide all mandated services. The jail kitchen, located on the second level, prepares meals for all in-house inmates as well as sending out meals to the County's Work Furlough Program and Juvenile Facilities.

The Sheriff's Branch Jail Honor Farm is located on 135 acres in the Ojai Valley at 370 West Baldwin Road. It has a total capacity of 212 inmates. These inmates are housed in two separate areas within the facility. The wheel shaped building is occupied by minimum security inmates who, under the supervision of Sheriff's personnel, work in the kitchen, laundry, and farm areas. The other major building is occupied by female inmates in the custody of the Sheriff. The farm operation provides a considerable savings to the citizens of Ventura County by raising and processing all of the beef, pork and rabbit used in the jail system plus much of the vegetables. The Honor Farm laundry service provides laundry services for the entire Custody Division as well as the Work Furlough Program. Other buildings include: a deputy residence, administrative office, mobile office, agriculture-related buildings, carpentry shop, welding shop, storage, garages, machine shop, and a boiler building.

Plans are proceeding for the construction of a new jail facility to relieve the overcrowding in the existing facilities. The new jail facility will be located in the west Santa Clara River Valley, south of Highway 126 at the terminus of Todd Road. The facility will have the capacity to house 2,307 inmates. The jail will consist of modular buildings and accessory structures. Plans for the jail also involve an onsite sewage treatment plant and water storage system. Facilities include an inmate laundry facility, kitchen, inmate vocational/educational facility, administrative offices and inmate vocational/training programs. Work began in 1988 to refurbish a U.S. Forest Service Camp in Rose Valley that will house approximately 160 inmates.

4.7.1.5 Special Services

The Special Services Division has a variety of functions that are performed by the following bureaus: Major Crimes, Special Investigations, Technical Services, Crime Laboratory, and the Air Unit. The Sheriff's hangar facility is located at Camarillo Airport at 275 E. Pleasant Valley Road, Camarillo. Other areas of responsibility and special details include the Bomb Disposal Unit, Search and Rescue, Executive Protection, Mounted Patrol Detail and the Hostage Negotiation Team.

4.7.1.6 Support Services Division

This is the support element for the Sheriff's Department. It includes the Record Bureau, Research and Planning Bureau, Office of Emergency Services, Personnel Bureau and Psychological Services.

The Training Bureau is responsible for the training of police recruits at the Ventura County Police and Sheriff's Training Academy and is located at 425 Durley Avenue, Camarillo Airport. This regional academy is accredited by California's Commission on Peace Officers Standards and Training. This bureau also handles a multitude of in-service training programs for all Sheriff's personnel. In addition, an extensive video tape and closed circuit television system are part of these efforts.

4.7.1.7 Court Services Division

This division was formed in 1980 when the County Marshal's Office merged with the Sheriff's Department. It handles all of the law enforcement assignments that center around Ventura County Court System, including both Superior and Municipal Courts.

The primary responsibility of Deputies assigned to the Court Security Bureau is to act as bailiffs and provide court security. The Field Service Bureau is the second major component of the Court Services Division, which processes subpoenas, levys, writs, attachments, garnishments, and civil warrants. The bureau also assists the courts with bail settings and own recognizance release investigations.

4.7.2 JAIL AND DETENTION FACILITIES

Inmates in Ventura County are housed at two major facilities: the Main Jail/Pre-Trial Detention Facility located at the Ventura County Government Center in Ventura, and the remaining inmates are housed at the Ventura County Branch Jail-Honor Farm at 370 West Baldwin Road in Ojai Valley. The East Valley Station at 2201 E. Olsen Road in Simi Valley has a temporary jail holding facility. Plans are proceeding for the construction of a new jail facility to be located in the west Santa Clara River Valley, south of Highway 126 at the terminus of Todd Road.

The jail and detention facilities are described in greater detail within the Custody Division of the Sheriff's Department (Section 4.7.1.4). Other facilities and services related to jail and detention facilities are provided by the Corrections Services Agency.

4.7.2.1 Corrections Services Agency

The purpose of the Corrections Services Agency is to unify and coordinate many of the correctional services supported by the County of Ventura. Achievement of this purpose requires the agency to deliver a magnitude of services to a wide variety of cases referred to it by citizens, schools, law enforcement, and the courts.

Briefly, these services are provided by the agency through four divisions: Court, Field, Institutional, and Support Services. Basically, Court Services is responsible for juvenile and adult intake screening, prepares pre-sentencing reports for both the Criminal and Juvenile Courts, and administers a Youth Services Program, designed to preempt delinquent behavior. Field Services provides the supervision for adult and juvenile probationers and administers a Direct Work Program designed to cultivate community service work projects for adults and juveniles in lieu of incarceration. Institutional Services supports three juvenile (Tatum, Colston, and Juvenile Restitution) and one adult (Work Furlough) facilities to house sentenced minors and adults. Support Services centralizes resources in operations designed to more efficiently benefit those programs previously discussed.

The main Corrections Services Agency Office is located at the Criminal Justice Complex, County Government Center, 800 South Victoria Avenue, Ventura. Facilities include:

- Clifton Tatum Center (Ventura County Juvenile Hall) is located at 380 Hillmont, Ventura (owned).
- Frank A. Colston Youth Center (local placement for juvenile offenders) is located at 375 Hillmont, Ventura (owned).
- Juvenile Restitution Project/Work Release Center is located at 381 Hospital Road, Ventura (owned).
- Work Furlough is located at 410 Willis Avenue, Camarillo, on the Camarillo Airport Property. Currently, there are two buildings: Work Furlough Facility Bldg. 276 and Work Furlough Bldg. 252 (including dining hall and offices) (owned).

Court Services are located at the following locations:

- 384 Hillmont Street, Ventura (owned)
- 515 South "C" Street, Oxnard (leased)
- 3475 Old Conejo Road, Newbury Park (leased)

Field Services have offices at:

- 242 W. Second Street, 3rd Floor, Oxnard (owned)
- 3855-F Alamo Street, Simi Valley (owned)
- 1065 E. Main Street, Ventura (leased)

4.7.3 COURTS

The Municipal Court has original jurisdiction in felony preliminary hearings, civil matters of $15,000 or less, misdemeanors, infractions, and small claims matters of $1,500 or less.

The Superior Court is a court of original jurisdiction, and is the highest level of trial court in the County and State. It has jurisdiction in all cases in equity, cases involving title to and possession of real property, civil cases where the demand exceeds $15,000, criminal cases classified as felonies, probate and family law matters, adoptions, mental health and juvenile cases, as well as matters appealed from the lower trial court (Municipal Court).

Both the Municipal Court and Superior Court are located in the Hall of Justice, located at the Ventura County Government Center complex at 800 South Victoria Avenue, Ventura. Simi Valley also has a Municipal Court Branch located at 3855-F Alamo Street, Simi Valley (owned).

4.7.4 EMERGENCY SERVICES

There will always be emergencies and disasters. Mitigating them, preparing for them, responding to them, and recovering from them are primarily the responsibilities of the State and local governments. Because every emergency occurs at the local level, local officials must be prepared to respond quickly and effectively, especially in the initial phase of a disaster before the State or Federal governments provide supplemental assistance. It is, therefore, necessary that local government be able to execute operational plans effectively, mobilize available resources, and call upon response personnel trained to carry out assigned emergency responsibilities.

The overall goal of the Ventura County Office of Emergency Services, as the leader of the local effort, is: "to save lives and protect property by developing programs and emergency operational capabilities that mitigate, prepare for, respond to, and recover from any emergency or disaster - whether peacetime or war-related."

According to County Ordinance 2538, the Sheriff is the Director of Disaster (Emergency) Services. Emergency Services planning in Ventura County is conducted in the Sheriff's Department, Support Services Division, Office of Emergency Services. The staff coordinates planning at each government level.

Local government is recognized as the first line of official public responsibility for emergency management activity. In a disaster, State and Federal Governments can be counted on for major support only when damage has been usually widespread and severe. The role of local emergency management agency, as the focus of the planning effort, is to develop and maintain an ongoing program of mitigation, preparedness,

response, and recovery. It is not a separate unit or action group set apart from the normal functions of government, standing by to "save the day," in the event of an emergency. The Emergency Management Agency serves the Board of Supervisors and Chief Administrative Office by working with the departments of local government and private sector organizations in the development of plans and capabilities responsive to those hazards which seriously threaten the jurisdiction. Prior to a crisis, hazard mitigation programs can reduce the vulnerability of people and property. In a crisis, effective response is often a result of what has been accomplished prior to the emergency.

The eight major elements of the Office of Emergency Services work program includes:

1. Emergency Organization Planning and Management.
2. Direction, Control and Warning.
3. Population Protection.
4. Contamination, Monitoring and Control.
5. Public Education and Emergency Public Information.
6. Emergency Support Services.
7. Hazard Analysis and Mitigation.
8. Multi-Hazards Functional Planning Guidance.

Programs in the department include Public Education presentations on the following hazards:

1. Earthquakes
2. Floods
3. Tsunami/Seiche
4. Wildland Fire
5. Hazardous Materials
6. Landslides
7. Dam Failure Emergency
8. Nuclear Defense/Radiological
9. Transportation Accidents (involving airplanes, boats, major highway accidents, and railroads)

Emergency Response Plans are kept on all of the above natural and man-made disasters. Staff of the department participate in Local, Regional, State, and Federal committees for California and Southern California Emergency Services.

As part of this planning, the Office of Emergency Services has developed and maintains an inventory of facilities for shelter, has established a capability to supply shelters with necessary materials to function, and has provided pre-designated evacuation routes for disaster events including dam failures, hazardous materials spills, earthquakes, tsunamis, and wildfires.

4.7.5 CONCLUSIONS

Crime has a direct effect on the quality of life in Ventura County. As County population increases, the demand on law enforcement and criminal justice services will be similarly impacted. To meet this challenge, the Goals, Policies, and Programs Chapter of the General Plan should address issues related for the provision of adequate security for new development.

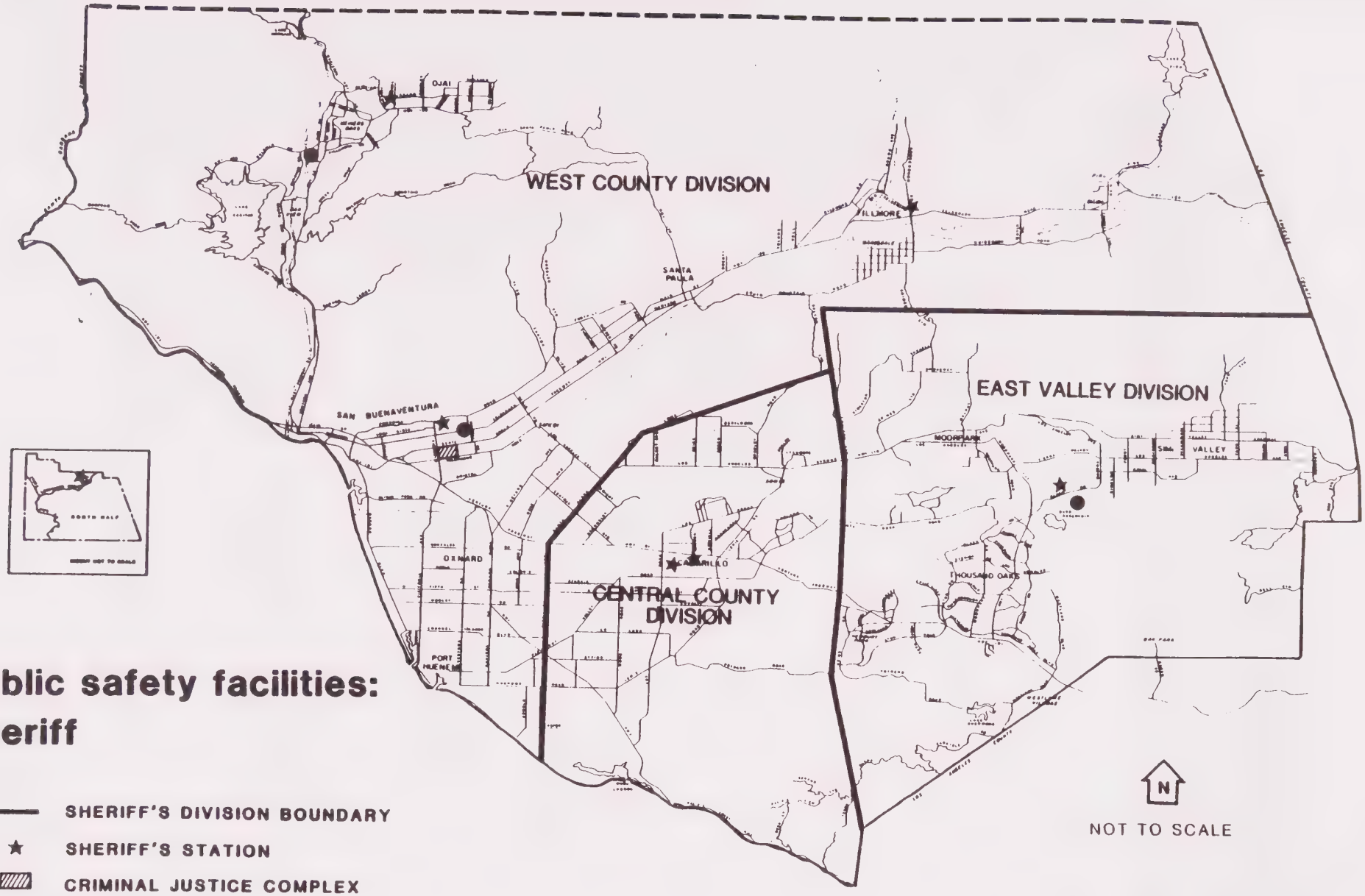
REFERENCES

Ventura County Sheriff's Department, 1984 Annual Report
Corrections Services Agency Goals and Objectives 1986-87
Municipal Court Goals and Objectives 1986-87

Superior Court Goals and Objectives 1986-87
Sheriff's Department Goals and Objectives 1986-87

INDIVIDUALS CONSULTED

Sgt. Paul Buckley, Planning & Research, Ventura County Sheriff's Department
Karen Guidi, Office of Emergency Services, Ventura County Sheriff's Department
Lt. Richard Rodriguez, Planning and Research, Ventura County Sheriff's Department
Commander William Wade, Custody Division, Ventura County Sheriff's Department



public safety facilities: sheriff

- SHERIFF'S DIVISION BOUNDARY
- ★ SHERIFF'S STATION
- CRIMINAL JUSTICE COMPLEX
- ● JAIL LOCK-UP FACILITIES

NOT TO SCALE

SOURCE: VENTURA COUNTY PLANNING DIVISION 1990

VENTURA COUNTY GENERAL PLAN
PUBLIC SAFETY FACILITIES APPENDIX Fig.4.7
Revised Dec. 1990

4.8 FIRE PROTECTION

The Fire Protection Section includes a discussion of the Ventura County Fire Protection District and other fire protection agencies which serve Ventura County.

4.8.1 VENTURA COUNTY FIRE PROTECTION DISTRICT

The Ventura County Fire Protection District is a special district formed on May 16, 1928, and governed by the Board of Supervisors. The Ventura County Fire Protection District protects life and property by providing fire prevention, fire suppression, fire investigation, hazardous materials response team, rescue and related emergency services.

The County Fire Protection District operates 32 fire stations that serve the municipalities of Camarillo, Moorpark, Ojai, Port Hueneme, Simi Valley, and Thousand Oaks, and the unincorporated regions of Ventura County.

The Fire Protection District is divided into four battalion areas with a total of 32 fire stations strategically located to provide fire protection for urban areas, as well as the extremely important watershed areas, for the benefit of the entire County (refer to Figure 4.8.2 for the Station Directory list for the County Fire Protection District). Figure 4.8.1 shows a map of the fire stations.

Each existing station is equipped with one first run engine. Various stations have reserve engines and patrol units with three rescue squads, two light air units and three ladder trucks geographically distributed. Response times vary considerably throughout the service area depending on the area's distance to the nearest station.

In 1990, the Fire Protection District had a staff of 390 fire suppression personnel plus an additional 40 reserve firefighters and 70 support personnel. The County has mutual aid agreements with all adjacent counties, incorporated cities within the County plus Carpinteria, military installations and the U.S. Forest Service. Ventura County Fire Protection District has also signed a Memorandum of Agreement to establish a coordinated effort with ten other Federal, State and local agencies to accomplish joint arson investigation and resource sharing.

In 1990, major fire equipment for the Fire Protection District included:

- 32 First Run Engines
- 16 Reserve Engines
- 10 Wildland Brush Trucks
- 10 Patrol Units
- 3 Rescue Units
- 3 Aerial Ladder Trucks
- 1 Reserve Ladder Truck
- 3 Bulldozers
- 2 Hazardous Materials (HazMat) Response Vehicles
- 2 Light Air Units
- 2 Foam Tenders
- 2 Water Tenders
- 4 Helicopters available through Sheriff's Department

4.8.1.1 Fire Prevention

Besides the actual fighting of fires, a great deal of time is spent on preventive measures and preparation for combating fires. Fire

prevention consists of making inspections of buildings, schools, and homes, and making recommendations for fire safety. Other Fire Prevention Programs include:

- New Construction Plan Check (Fire Safety)
- Occupancy Permit Inspections (Fire Safety)
- Fire Safety Inspections (Commercial, Industrial & Residential)
- Hazardous Material Inspections
- Fire Investigations
- Juvenile Fire Setter Counseling
- Construct Firebreaks and Fire Roads
- Conduct Prescribed Burns
- Issue Burning Permits
- Inspection of Fire Hydrants
- Fire Systems Plan Check and Inspections
- Weed Abatement
- Issue Explosive Permits

Fire prevention programs are also sponsored through the schools, service clubs, and other organizations with the following public education programs available:

- Baby Sitter Fire Safety
- Brush Fire Safety
- Business Fire Safety
- Career Guidance
- Earthquake Safety
- Fire Apparatus Demonstrations
- Exiting
- Junior Fire Marshal
- Fire Extinguishers
- Home Fire Safety
- Mobile Home Fire Safety
- Motel and Hotel Fire Safety
- Smoke Detectors
- Station Tours
- Stop-Drop and Roll

4.8.1.2 Emergency Services

The following represents a comprehensive list of emergency services provided:

- Firefighting:
  - Building
  - Vegetation
  - Vehicle
  - Refuse
  - Out Structures (Storage Sheds, Barns, etc.)
  - Mobile Homes
  - Explosions
  - Oil Field Facilities
- Pressure Explosions
- Emergency Medical Services:
  - First Aid
  - CPR

- Rescues:
  - Extraction
  - Vehicle Accidents
  - Cave-ins (Person Stuck)

- Hazardous Conditions (Fuel Spill, Electrical, etc.):
  - Hazardous Material Release
  - Potential Hazardous Material Release

- Public Service:
  - Water Vac
  - Locked Out (Car/Home)
  - Smell of Gas/Smoke, etc.
  - Snake Calls

- Mutual Aid to Other Agencies

4.8.1.3 Peak Load Water Supply Requirements

Minimum required fire flows are identified in the Ventura County Water Works Manual, Section 2.33, however, commercial and industrial building fire flow requirements are determined by using the Insurance Services Organization (I.S.O.) formula as identified in the Uniform Fire Code, Section 10.301.

Minimum fire flow standards for Ventura County are 1,000 gallons per minute (GPM) in residential areas, 1,250 GPM minimum in commercial areas, and 1,500 GPM minimum in industrial areas.

4.8.1.4 Future Fire Protection Facilities for the Next Five Years

In 1990, the Ventura County Fire Protection District identified the following new facilities needed in the next five years.

- Replace or remodel the Lake Sherwood Fire Station (Station 33).
- Replace or remodel Oak View Fire Station (Station 23).
- Replace or remodel Camarillo Fire Station (Station 54).
- Build and operate a new station in North Ranch area near Kanan Road and Westlake Blvd.
- Build and operate a new fire station in the West Simi Industrial area (Alamos Canyon).
- Build and operate a new fire station in the East Santa Rosa Valley.

In addition, a new computer aided dispatch is in the process of being implemented and is scheduled to be operational by the end of 1991.

4.8.1.5 Fire Protection District Board of Appeals

On November 22, 1983, the Board of Supervisors adopted an ordinance establishing a five-member Board of Appeals for the Fire Protection District. Appointments will be on a two-year basis. Members receive no remuneration.

The function of this Board is to consider the suitability of proposed alternative materials or methods of construction when these

cannot be approved by the Fire Chief. The Board also provides a means for establishing reasonable interpretations of the Fire Protection District Ordinances. This process may be initiated when ambiguities appear or when important differences occur between a person and the Fire District.

4.8.2 OTHER FIRE PROTECTION AGENCIES

The cities of Oxnard and Ventura have their own separate fire departments staffed with paid firefighters at stations located throughout each city. The cities of Fillmore and Santa Paula each have their own volunteer fire departments. The Los Padres National Forest area of the County is served by the U.S. Forest Service.

U.S. Forest Service Fire Stations are located at:

- Chuchupate (west of Frazier Park in the Cuddy Valley area)
- Wheeler Gorge (on Highway 33 north of Ojai near Wheeler Springs)
- Oat Flat (north of Fillmore near the Sespe Oilfields)
- Ozena (on Highway 33 near junction of Lockwood Valley Road)
- Apache Saddle (3 miles west of Pine Mountain Club)
- Temscal (northeast of Piru adjacent to Lake Piru); and
- A helicopter pad on the west side of Lake Casitas.

4.8.3 CONCLUSIONS

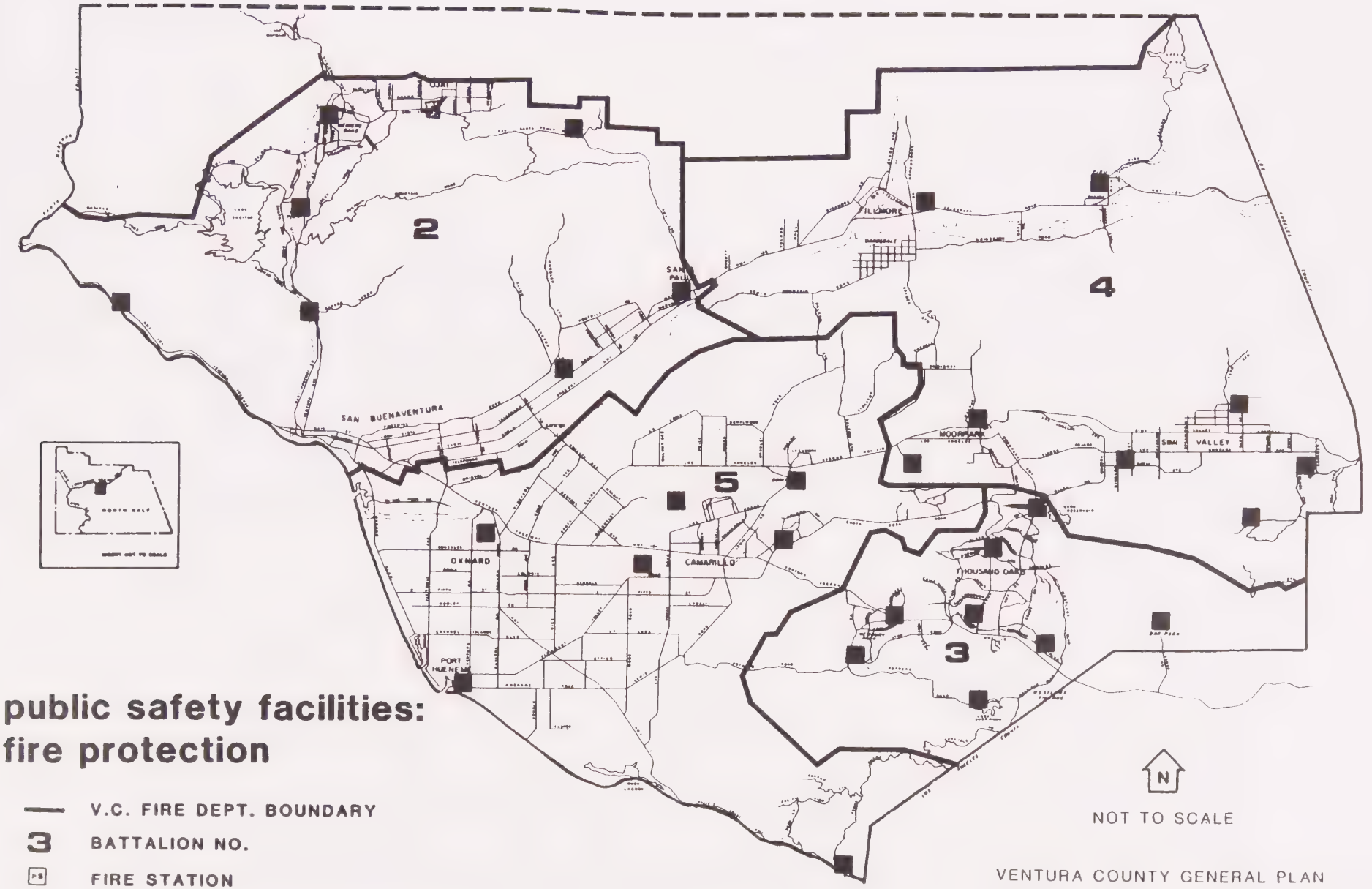
The provision of adequate fire protection services is an essential adjunct to development in Ventura County. Issues which should be addressed in the General Plans, Goals, Policies, and Programs include means to ensure that an adequate level of fire protection can be provided for all new development and give guidance in the selection of future fire stations to minimize response time.

REFERENCES

Ventura County Fire Protection District, Developer's Guide, December 1984.
Ventura County Fire Protection District, Goals and Objectives 1989-90.
Ventura County Fire Protection District, Private Road Guidelines, November 13, 1990.

INDIVIDUALS CONSULTED

Don Ellis, Deputy Fire Chief, Ventura County Fire Protection District
Gary Girod, Battalion Chief, Ventura County Fire Protection District
Dave Harvey, U.S. Forest Service, Ojai Ranger Station
Stan Rapp, Deputy Chief, Ventura County Fire Protection District
Captain Dan Spykerman, Ventura County Fire Protection District
George Lund, Deputy Fire Chief, Ventura County Fire Protection District
Robert Holaway, Deputy Fire Chief, Ventura County Fire Protection District
Richard L. Wilson, Fire Marshal, Ventura County Fire Protection District



public safety facilities: fire protection

— V.C. FIRE DEPT. BOUNDARY

3 BATTALION NO.

FIRE STATION

NOT TO SCALE

VENTURA COUNTY GENERAL PLAN
PUBLIC FACILITIES APPENDIX Fig.4.8.1

SOURCE: VENTURA COUNTY PLANNING DIVISION 1990

Revised Dec. 1990

FIGURE 4.8.2

VENTURA COUNTY FIRE PROTECTION DISTRICT
FACILITIES AND STATION DIRECTORY

Headquarters: Camarillo Airport, 395 Willis Avenue, Camarillo, CA 93010

Other Fire Facilities at Ventura County Fire Protection District Headquarters include:

- District Headquarters, 395 Willis Avenue, Camarillo
- Fire Prevention Annex, 460 Houck Street, Camarillo
- Fire Station #50, 615 Aviation Drive, Camarillo
- Training Smoke Room, 555 Aviation Drive, Camarillo
- Fire Communications Center, 355 Post Street, Camarillo
- Repair Shop for Fire Engines, 575 Aviation Drive, Camarillo

Radio Communication Facilities are located at Anacapa Island, Red Mountain, Rocketdyne and South Mountain.

STATION DIRECTORY

NUMBER	LOCATION	ADDRESS
16	Lockwood Valley	Star Route Box 475, Frazier Park 93225
20	Summit	12727 Santa Paula-Ojai Rd., Santa Paula 93060
21	Ojai	1201 Ojai Ave., Ojai 93023
22	Meiners Oaks	460 South LaLuna Ave., Ojai 93023
23	Oak View	15 Kunkle St., Oak View 93022
24	Avenue	5777 No. Ventura Ave., Ventura 93001
25	Rincon	5674 W. Pacific Coast Highway, Ventura 93001
26	Saticoy	12391 W. Telegraph Rd., Santa Paula 93060
30	Civic Center	325 W. Hillcrest Dr., Thousand Oaks 91360
31	Westlake	151 Duesenberg Dr., Thousand Oaks 91360
32	Potrero	830 S. Reino Rd., Newbury Park 91320
33	Lake Sherwood	25 E. Potrero Rd., Thousand Oaks 91360
34	Arboles	555 Avenue de los Arboles, Thousand Oaks 91360
35	Newbury Park	2500 W. Hillcrest Dr., Newbury Park 91320
36	Oak Park	855 N. Deerhill Rd., Agoura 91301
40	Mountain Meadows	4185 Cedar Springs St., Moorpark 93021
41	Blackstock	1920 Church St., Simi Valley 93065
42	Moorpark	782 Moorpark Ave., Moorpark 93021
43	Susana Knolls	1262 Cypress St., Santa Susana 93063
44	Wood Ranch	200 Country Club Dr., Simi Valley 93065
45	Pacific	790 Pacific Ave., Simi Valley 93065
46	Tapo	3265 N. Tapo St., Santa Susana 93063
47	Fillmore	613 W. Telegraph Rd., Fillmore 93015
48	Piru	513 N. Church St., Piru 93040
50	Camarillo Airport	615 Aviation Drive, Camarillo 93010
51	El Rio	660 El Rio Drive, Oxnard 93030
52	Mission Oaks	5353 Santa Rosa Rd., Camarillo 93010
53	Port Hueneme	304 Second Street, Port Hueneme 93041
54	Camarillo	2474 Ventura Blvd., Camarillo 93010
55	Las Posas	403 Valley Vista Dr., Camarillo 93010
56	Malibu	11677 E. Pacific Coast Highway, Malibu 90265
57	Somis	3356 Somis Road, Somis 93066

Source: Ventura County Fire Protection District, 1990

4.9 EDUCATIONAL FACILITIES AND SERVICES

The Educational Facilities and Services Section includes a discussion of the public elementary and secondary schools, Ventura County Superintendent of Schools Office Services, Public Community Colleges, Private Schools and Library Services.

4.9.1 PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

There are 20 public school districts in Ventura County which include seven Unified School Districts, 11 Elementary School Districts and two High School Districts. School district boundaries are generally not coterminous with city boundaries as portions of the unincorporated County areas are found in each school district. (Refer to Figure 4.9.1)

4.9.1.1 Unified School Districts in Ventura County (K-12) include:

- Conejo Valley Unified School District (Thousand Oaks, Newbury Park and Westlake)
- Fillmore Unified School District (Fillmore, Bardsdale, Piru and Northeast portion of the County)
- Moorpark Unified School District (Moorpark)
- Oak Park Unified School District (Oak Park and Agoura)
- Ojai Unified School District (Ojai Valley)
- Simi Valley Unified School District (Simi Valley)
- Ventura Unified School District (Ventura, Montalvo, Oak View and Saticoy)

Each of these districts and their school facilities are described below:

(1) Conejo Valley Unified School District (17,154 students, '89-'90)

The Conejo Valley Unified School District was founded on July 1, 1974. The District Office is located at 1400 East Janss Road, Thousand Oaks.

Elementary Schools include:

- Acacia School (K-6) - 55 Norman Avenue, Thousand Oaks
- Aspen School (K-6) - 1870 Oberlin Avenue, Thousand Oaks
- Banyan School (K-6) - 1120 Knollwood, Newbury Park
- Conejo School (K-6) - 280 Conejo School Road, Thousand Oaks
- Cypress School (K-6) - 4200 Kimber Drive, Newbury Park
- Glenwood School (K-6) - 1135 Windsor Drive, Thousand Oaks
- Ladera School (K-6) - 1211 Calle Almendro, Thousand Oaks
- Madrona School (K-6) - 612 Camino Manzanas, Thousand Oaks
- Manzanita School (K-6) - 2626 Michael Drive, Newbury Park
- Maple School (K-6) - 3501 Kimber Drive, Newbury Park
- Meadows School (K-6) - 2000 La Granada Drive, Thousand Oaks

- Park Oaks School (K-6) - 1335 Calle Bouganvilla, Thousand Oaks
- University School (K-6) - 2801 Altas Avenue, Thousand Oaks
- Walnut School (K-6) - 581 Dena Drive, Newbury Park
- Weathersfield School (K-6) - 3151 Darlington Drive, Thousand Oaks
- Westlake School (K-6) - 1571 East Potrero Road, Westlake Village
- Westlake Hills School (K-6) - 3333 South Medicine Bow Court, Westlake Village
- Wildwood School (K-6) - 620 West Velarde, Thousand Oaks

Intermediate Schools include:

- Colina Intermediate School (7-8) - 1500 Hillcrest, Thousand Oaks
- Los Cerritos Intermediate School (7-8) - 2100 Avenida de las Flores, Thousand Oaks
- Redwood Intermediate School (7-8) - 233 West Gainsborough Road, Thousand Oaks
- Sequoia Intermediate School (7-8) - 2855 Borchard Road, Newbury Park

High Schools include:

- Conejo Valley High School (9-12) - 1872 Newbury Road, Newbury Park
- Newbury Park High School (9-12) - 456 North Reino Road, Newbury Park
- Thousand Oaks High School (9-12) - 2323 Moorpark Road, Thousand Oaks
- Westlake High School (9-12)- 100 North Lakeview Canyon Road, Westlake Village

Adult Education:

- Conejo Valley Adult School - 1025 Old Farm Rd., Thousand Oaks

(2) Fillmore Unified School District (3,281 students, '90-'91)

The Fillmore Unified School District was unified on July 1, 1967. The District Office is located at 627 Sespe Avenue, Fillmore.

Elementary Schools include:

- Piru School (K-6) - 3811 East Center Street, Piru
- San Cayetano School (K-3) - 514 Mountain View St., Fillmore
- Sespe School (K, 4-6) - 425 Orchard St., Fillmore

Junior High School:

- Fillmore Junior High School (7-8) - 615 Shiells Drive, Fillmore

High School:

- Fillmore Senior High School (9-12) - 555 Central Avenue, Fillmore

Continuation High School:

- Fillmore Community School (9-12) - 532 "A" Street, Fillmore

Adult Education:

- Fillmore Community School - 532 "A" St., Fillmore

(3) Moorpark Unified School District (4,839 students, '89-'90)

The Moorpark Unified School District was unified on July 1, 1981. The District Office is located at 30 Flory Avenue, Moorpark.

Elementary Schools include:

- Campus Canyon (K-3) - 15300 Monroe Avenue, Moorpark
- Flory School (4-5) - 240 Flory Avenue, Moorpark
- Mountain Meadows (K-2) - 4200 Mountain Meadow Drive, Moorpark
- Peach Hill (K-3) - 13400 Christian Barrett Drive, Moorpark
- New Elementary School (3-5) - 4117 Countryhill Road, Moorpark

Middle School:

- Chaparral Middle School (6-8) - 280 Poindexter Avenue, Moorpark

High School:

- Moorpark High School (9-12) - 4500 Tierra Rejada Rd., Moorpark.

Community High School:

- Moorpark Community High School (9-12) - 280 Casey Rd., Moorpark

(4) Oak Park Unified School District (1,152 students, '87-'88)

The Oak Park Unified School District was unified on July 1, 1978. The District Office is located at 5801 East Conifer St., Agoura.

Elementary Schools:

- Brookside School (K-5) - 165 North Satinwood Avenue, Agoura

- Oak Mills School (K-5) - 1010 Kanan Rd., Agoura

Middle School:

- Medea Creek Middle School (6-8) - 899 North Kanan Road, Agoura

High School:

- Oak Park High School (9-12) - 899 North Kanan Road, Agoura

Continuation High School:

- Oak View High School (9-12) - 5701 East Conifer St., Agoura

(5) Ojai Unified School District (3,323 students, '89-'90)

The Ojai Unified School District was unified on July 1, 1966. The District Office is located at 414 East Ojai Avenue, Ojai.

Elementary Schools include:

- Meiners Oak School (K-6) - 400 South Lomita Avenue, Ojai
- Mira Monte School (K-6) - 1216 Loma Drive, Ojai
- San Antonio School (1-6) - 650 Carne Road, Ojai
- Summit School (K-6) - 12525 Ojai-Santa Paula Road, Ojai
- Topa Topa School (K-6) - 916 Mountain View, Ojai

Junior High School:

- Matilija Junior High School (7-8) - 703 El Paseo Road, Ojai

High School:

- Nordhoff High School (9-12) - 1401 Maricopa Highway, Ojai

Continuation High School:

- Chaparral Continuation High School (9-12) - 114 North Montgomery Ave., Ojai

Adult and Community Education:

- Adult and Community Education - 114 North Montgomery Ave., Ojai

(6) Simi Valley Unified School District (20,730 students, '89-'90)

The Simi Valley Unified School District was unified on July 1, 1936. The District Office is located at 875 East Cochran Street, Simi Valley.

Elementary Schools include:

- Abraham Lincoln School (K-6) - 1220 Fourth Street, Simi Valley
- Atherwood School (K-6) - 2350 East Greensward St., Simi Valley
- Berylwood School (K-6) - 2300 Heywood St., Simi Valley
- Big Springs School (K-6) - 3401 Big Springs Avenue, Simi Valley
- Crestview School (K-6) - 900 Crosby Avenue, Simi Valley
- Garden Grove School (K-6) - 2250 North Tracy Avenue, Simi Valley
- Hollow Hills Fundamental School (K-6) - 828 Gibson Avenue, Simi Valley

- Justin School (K-6) - 2245 North Justin Avenue, Simi Valley
- Katherine School (K-6) - 5455 Katherine Street, Simi Valley
- Knolls School (K-6) - 6334 Katherine Road, Simi Valley
- Madera School (K-6) - 250 Royal Avenue, Simi Valley
- Mountain View School (K-6) - 2925 Fletcher Avenue, Simi Valley
- Park View Center School (K-6) - 1500 Alexander St., Simi Valley
- Santa Susana School (K-6) - 4300 Apricot Road, Simi Valley
- Simi School (K-6) - 2956 School Street, Simi Valley
- Sycamore School (K-6) - 2100 Ravenna St., Simi Valley
- Township School (K-6) - 4101 Township Avenue, Simi Valley
- Vista Fundamental School (K-6) - 2175 Wisteria Street, Simi Valley
- White Oak School (K-6) - 2201 Alscot Avenue, Simi Valley

Junior High Schools include:

- Hillside Junior High School (7-9) - 2222 East Fitzgerald Road, Simi Valley
- Sequoia Junior High School (7-9) - 3570 Cochran St., Simi Valley
- Sinaloa Junior High School (7-9) - 601 Royal Avenue, Simi Valley
- Valley View Junior High School (7-9) - 3347 Tapo Street, Simi Valley

High Schools include:

- Royal High School (10-12) - 1402 Royal Avenue, Simi Valley
- Simi Valley High School (10-12) - 5400 Cochran St., Simi Valley

Continuation High School:

- Apollo Continuation High School (10-12) - 3150 School St., Simi Valley

Adult Education:

- Adult Education - 3192 Los Angeles Avenue, Simi Valley

(7) Ventura Unified School District (14,984 students, '89-'90)

The Ventura Unified School District was unified on July 1, 1966. The main District Office is located at 120 East Santa Clara St., Ventura. The business and personnel functions are located at 295 South Arcade Drive, Ventura.

Elementary Schools include:

- Arnaz School (K-5) - 400 Sunset Avenue, Oak View
- Elmhurst School (K-5) - 5080 Elmhurst St., Ventura
- Foster, E.P. School (K-5) - 20 Pleasant Place, Ventura
- Juanamaria School (K-5) - 100 South Crocker Avenue, Ventura
- Lincoln School (K-5) - 1107 East Santa Clara, Ventura

- Loma Vista School (K-5) - 300 Lynn Drive, Ventura
- Montalvo School (K-5) - 2050 Grand Avenue, Ventura
- Mount School (K-5) - 455 South Hill Road, Ventura
- Oak View School (K-5) - 555 Mahoney St., Oak View
- Pierpont School (K-5) - Martha's Vineyard Court, Ventura
- Poinsetta School (K-5) - 350 North Victoria Avenue, Ventura
- Portola School (K-5) - 1350 Partridge St., Ventura
- Blanche Reynolds School (K-5) - 450 Valmore Avenue, Ventura
- Will Rogers School (K-5) - 316 Howard Street, Ventura
- Saticoy School (K-5) - 760 Jazmin Avenue, Ventura
- Junipero Sierra School (K-5) - 8880 Halifax, Ventura
- Sheridan Way School (K-5) - 573 Sheridan Way, Ventura

Middle Schools include:

- Anacapa Middle School (6-8) - 100 South Mills Avenue, Ventura
- Balboa Middle School (6-8) - 274 Hill Road, Ventura
- Cabrillo Middle School (6-8) - 1426 East Santa Clara St., Ventura
- De Anza Middle School (6-8) - 2060 Cameron Street, Ventura

High Schools include:

- Buena High School (9-12) - 5670 Telegraph Road, Ventura
- Ventura High School (9-12) - 2155 East Main Street, Ventura

Continuation High School:

- Mar Vista Continuation/Opportunity School (7-12) - 501 College Drive, Ventura

Adult Education:

- Ventura Adult Education - 501 College Drive, Ventura

Off-Campus Center:

- Off-Campus Center - 150 North Day Road, Ventura

4.9.1.2 Elementary School Districts in Ventura County (K-8) include:

- Hueneme Elementary School District (Oxnard, Port Hueneme and Hollywood Beach)
- Ocean View Elementary School District (Southern Ventura County and Santa Monica Mountains)
- Oxnard Elementary School District (Oxnard area and beach areas)
- Rio Elementary School District (El Rio)
- Mesa Union Elementary School District (area between Saticoy and Somis)
- Pleasant Valley Elementary School District (Camarillo Heights, Santa Rosa and Las Posas Valleys)

- Somis Union Elementary School District (Somis)
- Briggs Elementary School District (west of Santa Paula)
- Mupu Elementary School District (north of Santa Paula)
- Santa Clara Elementary School District (east of Santa Paula)
- Santa Paula Elementary School District (city of Santa Paula)

Each of these district and their school facilities are described below:

(1) Hueneme Elementary School District (7,198 students, '90-'91)

The Hueneme Elementary School District was founded in 1873. The District Office is located at 205 North Ventura Road, Port Hueneme.

Elementary Schools include:

- Bard, Richard School (K-6) - 622 East Pleasant Valley Road, Port Hueneme
- Hathaway, Julien G. (K-6) - 405 East Dollie Street, Oxnard
- Haycox, Art School (K-6) - 5400 Perkins Road, Oxnard
- Hollywood Beach (K-6) - 4000 Sunset Lane, Oxnard
- Hueneme School (K-6) - 344 North Third St., Port Hueneme
- Larsen, Ansgar School (K-6) - 550 East Thomas Avenue, Oxnard
- Parkview Schools (K-6) - 1416 Sixth Place, Port Hueneme
- Sunkist School (K-6) - 1400 Teakwood St., Oxnard
- Williams, Fred School (K-6) - 4300 Anchorage St., Oxnard

Intermediate Schools include:

- Blackstock, Charles School (6-8) - 701 Bard Road, Oxnard
- Green, E.O. School (6-8) - 3739 South "C" St., Oxnard

(2) Ocean View Elementary School District (2,335 students, '90-'91)

The Ocean View Elementary School District was founded in 1873. The District Office is located at 2382 Etting Road, Oxnard.

Elementary Schools include:

- Laguna Vista School (K-5) - 5084 Etting Road, Oxnard
- Mar Vista School (K-5) - 2382 Etting Road, Oxnard
- Tierra Vista School (K-5) - 2001 Sanford St., Oxnard

Junior High School:

- Ocean View Junior High School (6-8) - 4300 Olds Road, Oxnard

Special Education:

- Children's Center - 5201 Squires Drive, Oxnard

(3) Oxnard Elementary School District (12,272 students, '90-'91)

The Oxnard Elementary School District was founded in 1873. The District Office is located at 1051 South "A" St., Oxnard.

Elementary Schools include:

- Curren, Bernice School (K, 4-6) - 1101 North "F" St., Oxnard
- Driffill School (K-6) - 910 South "E" Street, Oxnard
- Elm Street School (K, 4-6) - 450 East Elm St., Oxnard
- Harrington, Norma School (K-3) - 2501 South Gisler Ave., Oxnard
- Juanita School (K-3) - 224 N. Juanita Ave., Oxnard
- Kamala School (K-6) - 634 West Kamala St., Oxnard
- Lemonwood School (K-6) - 2200 Carnegie Ct, Oxnard
- Marina West School (K-3) - 2501 Carob St., Oxnard
- McAuliffe School (K-5) - 3300 West Via Marina Ave., Oxnard
- McKinna, Dennis School (K-6) - 1611 South "J" St., Oxnard
- Ramona School (K-3) - 804 Cooper Road, Oxnard
- Rose Avenue School (K, 4-6) - 220 S. Driskill Ave., Oxnard
- Sierra Linda School (K, 4-6) - 2201 Jasmine Ave., Oxnard

Intermediate Schools include:

- Fremont, John Charles Intermediate School (7-8) - 1130 North "M" St., Oxnard
- Haydock, Richard Barrett Intermediate School (7-8) - 647 West Hill St., Oxnard
- Nueva Vista Alternative Education (7-8) - 925 South "A" Street, Oxnard

Special Education:

- San Miguel School (K-6) - 2400 South "J" Street, Oxnard

(4) Rio Elementary School District (2,537 students, '90-'91)

The Rio Elementary School District was founded in 1885. The District Office is located at 3300 Cortez St., Oxnard (El Rio).

Elementary Schools include:

- El Rio School (K-6) - 2714 Vineyard Ave., Oxnard (El Rio)
- Rio Lindo School (K-6) - 2131 Snow Ave., Oxnard (El Rio)
- Rio Plaza School (K-6) - 600 Simon Way, Oxnard (El Rio)
- Rio Real School (K-6) - 1140 Kenny St., Oxnard (El Rio)

Junior High Schools include:

- Rio Del Valle School (7-8) - 3100 Rose Avenue, Oxnard (El Rio)
- Rio Vista Opportunity School (7-8) - 3334 Santa Clara Ave., Oxnard

(5) Mesa Union Elementary School District (350 students, '90-91)

The Mesa Union Elementary School District was founded in 1891. The District Office is located at 3901 North Mesa School Road, Somis.

- Mesa School (K-8) - 3901 North Mesa School Road, Somis

(6) Pleasant Valley Elementary School District (6,479 students, '90-'91)

The Pleasant Valley Elementary School District was founded in 1868. The District Office is located at 600 Temple Ave., Camarillo.

Elementary Schools include:

- Bedford Open School (K-6) - 1099 North Bedford St., Camarillo
- Camarillo Heights School (K-6) - 35 Catalina Drive, Camarillo
- Dos Caminos School (K-6) - 3635 Appian Way, Camarillo
  Dos Caminos School Fundamental Program K-6
- El Descanso School (K-6) - 1099 North Bedford St., Camarillo
- El Rancho School (K-6) - 600 Temple Avenue, Camarillo
- Las Colinas School (K-6) - 5750 Fieldcrest Drive, Camarillo
- Las Posas School (K-6) - 75 Calle La Guerra, Camarillo
- Los Nogales School (K-6) - 1555 North Kendall Avenue, Camarillo
- Los Primeros School (K-8) - 2222 Ventura Blvd., Camarillo
- Santa Rosa School (K-6) - 13282 Santa Rosa Road, Camarillo
- Valle Lindo School (K-6) - 777 Aileen

Intermediate Schools include:

- Los Altos Intermediate School (7-8) - 700 Temple Ave., Camarillo
- Monte Vista Intermediate School (7-8) - 888 North Lantana St., Camarillo

(7) Somis Union Elementary School District (315 students, '90-'91)

The Somis Union Elementary School District was founded in 1895. The District Office is located at 5628 North St., Somis.

- Somis School (K-8) - 5628 North St., Somis

(8) Briggs Elementary School District (325 students, '90-'91)

The Briggs Elementary School District was founded in 1873. The District Office is located at 14438 Telegraph Rd., Santa Paula.

Elementary Schools include:

- Briggs School (4-8) - 14438 Telegraph Road, Santa Paula
- Olivelands School (K-3) - 12465 Foothill Road, Santa Paula

(9) Mupu Elementary School District (111 students, '90-'91)

The Mupu Elementary School District was founded in 1879. The District Office is located at 4410 North Ojai Road, Santa Paula.

- Mupu School (1-8) - 4410 North Ojai Road, Santa Paula

(10) Santa Clara Elementary School District (29 students, '90-'91)

The Santa Clara Elementary School District was founded in 1873. The District Office is located at 20030 East Telegraph Road, Santa Paula.

- Santa Clara School (K-6) - 20030 East Telegraph Road, Santa Paula

(11) Santa Paula Elementary School District (3,177 students, '90-'91)

The Santa Paula Elementary School District was founded in 1873. The District Office is located at 144 North Davis Street, Santa Paula.

Elementary Schools include:

- Bedell, Thelma B. School (K-5) - 1305 Laurel Road, Santa Paula
- Blanchard School (K-5) - 115 Peck Rd., Santa Paula
- Glen City School (K-5) - 141 South Steckle Drive, Santa Paula
- McKevett School (K-5) - 955 Pleasant St., Santa Paula
- Portal School (K-6) - 305 North 11th St., Santa Paula
- Thille, Grace S., School (K-5) - 1144 Ventura St., Santa Paula
- Webster, Barbara, School (K-5) - 1150 Saticoy St., Santa Paula

Junior High School:

- Isbell School (6-8) - 221 South Fourth St., Santa Paula

Special Education:

- Child Development Center - 1111 East Santa Paula St., Santa Paula

4.9.1.3 High School Districts (9-12)

High School Districts serve Oxnard, Camarillo, Port Hueneme and Santa Paula areas. Each of these districts and their school facilities are described below:

(1) Oxnard Union High School District (12,636 students, '89-90)

The Oxnard Union High School District, founded in 1901, serves the Oxnard, Port Hueneme and Camarillo areas including the following elementary school districts: Hueneme, Mesa Union, Ocean View, Oxnard, Pleasant Valley, Rio and Somis Union. The District Office is located at 309 South "K" Street, Oxnard.

High Schools include:

- Camarillo, Adolfo High School (9-12) - 4660 Mission Oaks Blvd., Camarillo
- Channel Islands High School (9-12) - 1400 East Raiders Way, Oxnard
- Hueneme High School (9-12) - 500 Bard Road, Oxnard
- Oxnard High School (9-12) - 937 West Fifth St., Oxnard
- Rio Mesa High School (9-12) - 545 Central Ave., Oxnard

Continuation School:

- Frontier Continuation Education/Alternative Education (9-12) - East Pleasant Valley and Las Posas Roads, Camarillo

Adult Education:

- Oxnard High Adult Education School - 935 West Fifth St., Oxnard

(2) Santa Paula Union High School District (1,217 students, '89-'90)

The Santa Paula Union High School District, founded in 1891, serves the Santa Paula area including the Briggs, Mupu, Santa Clara and Santa Paula Elementary School Districts. The District Office is located at 404 North Sixth St., Santa Paula.

High School:

- Santa Paula Union High School (9-12) - 404 N. Sixth St., Santa Paula

Continuation Education:

- Renaissance Continuation Education (9-12) - 404 North Sixth St., Santa Paula

Adult Education:

- Adult School - 404 North Sixth St., Santa Paula

Special Education:

- District Alternative Programs - 404 North Sixth St., Santa Paula

4.9.1.4 North Half

In addition, the Cuyama Joint Union District serves the extreme northwest corner of the County, with the major portion of the district in Santa Barbara County. The elementary school is in Cuyama in Santa Barbara County. Other elementary students in the North Half attend school in El Tejon or in Frazier Park in Kern County. The Fillmore Unified School District contracts with Kern County for school services for the children of Lockwood Valley. The North Half is divided into the Santa Paula and Santa Maria Union High School Districts, with the Lockwood Valley High School students attending high school in Bakersfield under a contract between Fillmore High School and Kern County.

4.9.2 VENTURA COUNTY SUPERINTENDENT OF SCHOOLS OFFICE SERVICES

The Ventura County Superintendent of Schools Office serves as an intermediate unit between the state and local school districts. The primary role of the office is to promote quality educational services to all students by providing leadership, support, assistance, and coordination to school districts and county operated programs through the provisions of administrative, educational, fiscal and clerical services. The Ventura County Superintendent of Schools Main Office is located at 535 E. Main Street, Ventura. The Ventura County Superintendent of Schools Office provides the following services:

- Regional Occupational Program

  The Regional Occupational Program prepares students from throughout Ventura County for the transition from school to work by developing work maturity skills, self-confidence, and independence through quality occupational education, training, and support services.

  Fourteen programs are operated at the Camarillo Airport and nine satellite programs are operated at local schools and private industry sites.

  The Regional Occupational Program is administered at the Camarillo Airport, 465 Horizon Circle, Camarillo.

- Special Education

  The Ventura County Superintendent of Schools (VCSS) operates special education programs for students from preschool age through age 21 who are severely handicapped. The students served by the VCSS programs generally have one or more of the following handicapping conditions:

  OH - Orthopedically Handicapped
  PH - Physically Handicapped
  MH - Multihandicapped
  SH - Severely Handicapped
  DB - Deaf Blind
  OHI - Other Health Impaired

  Additionally, support services to the programs include psychological services, speech and language services, audiological services, health services, adapted physical education services, and transportation.

- Special Education is offered at the following sites:

  - Boswell, Dorothy School - 5190 Loma Vista Road, Ventura
  - De Anza Special Day Class - 2060 Cameron St., Ventura
  - Dwire, Carl School - 3150 Via Marina, Oxnard
  - Henderson, Shirley Work Training Facility - 500 Airport Way, Camarillo
  - Newbury Park High School, (secondary and post-secondary classes) - 456 North Rhone Rd., Newbury Park
  - Nueva Vida School - 220 South "K" St., Oxnard
  - Penfield, Douglas School - 640 Jazmin Avenue, Ventura
  - Phoenix School - 424 Horizon Circle, Camarillo
  - Rio Mesa Special - 533 Central Ave., Oxnard
  - Triggs, Dean School - 1401 Paige Lane, Thousand Oaks

- Gateway Community School

  The Gateway Community School, a year-round school, serves students from grades 7 through 12. Community school students are served on independent study contracts, working one-on-one with the teacher, as a team, to promote student achievement and success. Typically, students work toward graduation or they try to catch up academically so they may return on schedule to their local school. Most are students that have experienced difficulty in the traditional school setting and/or at home, and are in need of a program that provides individual and personal attention. The Gateway Community School is located at the Camarillo Airport. Two branch programs of Gateway, CAP and VIP, are located in Ventura and offer a specific alternative educational service to high risk youth in the local area.

- Court Schools

  The Ventura County Superintendent of Schools has three Juvenile Court Schools which provide year-round educational programs to incarcerated youth in each of Ventura County's Correctional Facilities. The three schools, all located in Ventura, and their respective facilities are: Marguerite McBride School (Clifton Tatum Center or Juvenile Hall), Ventura; Frank A. Colston School (Colston Youth Center), Ventura; Juvenile Restitution Project (Work Release Center), Ventura. The three schools have developed a curriculum and instructional approach designed to best fit the needs of their students and complement the overall purpose of the particular correctional facility.

4.9.3 PUBLIC COMMUNITY COLLEGES

The Ventura County Community College District (71 Day Road, Ventura) is responsible for providing public community college education in Ventura County. The Community College District, which was formed in 1962, operates three colleges: Ventura College founded in 1925 (4667 Telegraph Road), Moorpark College founded in 1963 (7075 Campus Road) and Oxnard College opened in 1975 (4000 South Rose Avenue). These colleges serve all communities in the County, except for an area in the northwestern part of the County served by the Kern Community College District.

Enrollment in the Community Colleges is influenced by various factors yearly. Overall enrollment in the three community colleges in the Fall semester of 1990 was 32,065. This includes 12,237 day and evening students at Moorpark College, 6,767 day and evening students at Oxnard College, and 13,061 day, evening, and non-credit students at Ventura College. The overall enrollment for 1990 was the highest in the history of the District.

The Ventura County Community College District sets as its goals and accepts responsibility for meeting the educational needs of all eligible students who enter its colleges by offering the most comprehensive programs and services possible. The District's colleges are to be open to all eligible students who can profit from instruction. The District encourages its three colleges to develop independently, and with a flexibility sufficient to respond to changing student and community needs. The colleges provide general education, transfer to four-year colleges and universities, occupational and developmental programs, guidance, and continuing education.

4.9.4 PRIVATE SCHOOLS

Private education is available at all levels in Ventura County. The following is a list of private schools having an enrollment of at least ten students:

4.9.4.1 Private Elementary and High Schools:

The County Superintendent of Schools maintains a list of all private schools located in Ventura County. For the 1990-91 school year, there were a total of 202 private schools located in the County. The 83 schools having an enrollment of at least 10 students are listed below:

- Arroyo Montessori (K-6) - 225 Ulysses Street, Simi Valley
- Ascension Lutheran Elementary School (K-8) - 1600 Hillcrest Drive, Thousand Oaks
- Assistance League School (K) - 1310 Fremont Way, Oxnard
- Bethany Christian Elementary (K-6) - 200 W. Bethany Ct., Thousand Oaks
- California Learning Center of Thousand Oaks (1-4) -1459 Thousand Oaks Blvd., Thousand Oaks
- Camarillo Montessori School (K) - 3701 Las Posas Rd.
- Carden School of Camarillo (K-8) - 1915 E. Las Posas Road, Camarillo
- Children's Place, The (K) - 2304 Antonio Avenue, Camarillo
- Children's World Learning Centers (K), 5165 Cochran St., Simi Valley
- Christian Nursery Kindergarten (K) - 301 Avenue De Las Flores, Thousand Oaks
- Cochran Baptist School (K-6), 4910 Cochran St., Simi Valley
- College Heights Christian Elementary (K-7) - 6360 Telephone Road, Ventura
- Community Christian School (K-8) - 723 South D Street, Oxnard
- Conejo Adventist Elementary (K-6) - 2645 W. Hillcrest Dr., Newbury Park
- Cornerstone Christian School (K-12) - 1777 Arneill Rd., Camarillo
- Discovery Place (1-6) - 10239 Ojai-Santa Paula Road, Ojai
- First Baptist Academy (K-10) - 1250 Erbes Road, Thousand Oaks
- First Baptist Day School (K-3), 426 South Mills Rd., Ventura
- First Lutheran School (K-3), 380 Arneill Rd., Camarillo
- Friends Elementary (K-4) - 3503 Arundell Circle, Suite A, Ventura
- Grace Brethren School (K-9) - 1717 Arcane, Simi Valley
- Grace Lutheran Christian Day School (K-5) - 6190 Telephone Road, Ventura
- Great Pacific Child Development Center (K) - 255 West Santa Clara, Ventura
- Green Valley Child Development Center (K) - 1924 Cochran Street, Simi Valley
- G.T. Water Products - Private School (1-10) - 5239 No. Commerce Ave., No. A
- Harvest Christian School (K-8) - 44 Beverly Dr., Camarillo
- Heritage Christian Academy (K-12) - 190 E. El Roblar, Ojai
- Herman Lewis Christian Academy (K-12) - 406 Acacia Rd., Santa Paula
- Hillcrest Christian School (K-12) - 384 Erbes Road, Thousand Oaks
- Holy Cross (K-8) - 183 E. Main St., Ventura
- Honey Tree Kindergarten (K) - One W. Avenida De Los Arboles, Thousand Oaks

- Hueneme Christian School (K-8) - 312 N. Ventura Road, Port Hueneme
- Intergate Academy of Arts & Sciences (K-5) - 2700 Borchard Road, Newbury Park
- John Jenkins Christian Academy/Preschool (K-12) - 217 North 10th Street, Santa Paula
- Kinder Care Learning Center (K) - 2425 Oakbrook Dr., Thousand Oaks
- La Reina High School (7-12) - 106 W. Janss Road, Thousand Oaks
- Lakeview Canyon Private School (7-12) - 150 Via Merida, Thousand Oaks
- Linda Vista Junior Academy (K-10) - 5050 Perry Way, Oxnard
- Little Oaks Montessori School (K-4) - 101 North Skyline Drive, Thousand Oaks
- Mary Law Private Elementary (K-6) - 2931 Albany Drive, Oxnard
- Master's School, The (K-12) - 1863 East Bancrost St., Camarillo
- Monica Ros School (K-3) - 783 McNell Road, Ojai
- Newbury Park Adventist Academy (9-12) - 180 Academy Drive, Newbury Park
- Oak Grove School of Krishnamurti (K-12) - 220 W. Lomita, Ojai
- Oak Meadow School (K-12) - 409 Topa Topa, Ojai
- Oak Meadow High School (9-12) - 409 Topa Topa, Ojai
- Oak View School House (K-12), - 655 Santa Ana Blvd., Oak View
- Ojai Seventh-Day Adventist School (1-8) - 291 East El Roblar Dr., Ojai
- Ojai Valley Children's House (K-6) - 806 W. Baldwin Road, Ojai
- Ojai Valley School (K-12) - 723 El Paseo Road, Ojai
- Our Lady of Guadalupe Elementary (K-8) - 530 N. Juanita Avenue, Oxnard
- Our Lady of the Assumption (K-8) - 3169 Telegraph Road, Ventura
- Peppermint Junction Children's Center, Inc. (K-3) - 2700 Buckaroo Ave. No. 8, Oxnard
- Phoenix Ranch School (K-1) - 5928 Los Angeles Ave., Simi Valley
- Pinecrest School (K-5) - 4974 Cochran Street, Simi Valley
- Pinecrest School (K-6) - 449 Wilbur Road, Thousand Oaks
- Rolling Oaks Child Development Center - 400 E. Rolling Oaks Drive, Thousand Oaks
- Sacred Heart School (K-8) - 10770 Henderson Road, Ventura
- Santa Clara Elementary (K-8) - 324 South E Street, Oxnard
- Santa Clara High School (9-12) - 2121 Saviers Road, Oxnard
- Santa Paula Christian (K-12) - 203 South Eighth Street, Santa Paula
- Simi Valley Christian Day Elementary (K) - 4200 Township, Simi Valley
- Simi Valley Seventh Day Adventist School (K-8) - 1636 Sinaloa Road, Simi Valley
- St. Anthony's Elementary (1-8) - 2421 South "C" Street, Oxnard
- St. Bonaventure High School (9-12) - 3167 Telegraph Road, Ventura
- St. John's Lutheran Elementary (K-8) - 1500 N. "C" Street, Oxnard
- St. Mary Magdalene (1-8) - 2534 Ventura Blvd., Camarillo
- St. Paschal Baylon Elementary (1-8) - 154 E. Janss Road, Thousand Oaks
- St. Patrick's Parish Day Elementary (K-6) - One Church Road, Thousand Oaks
- St. Paul's Parish Day Elementary (K-8) - 3290 Loma Vista Road, Ventura
- St. Rose of Lima Elementary (1-8) - 1325 Royal Avenue, Simi Valley
- St. Thomas Aquinas (K-8) - 210 Canada Street, Ojai

- Temple Christian School (K-8) - 5415 Ralston, Ventura
- Thacher School, The (9-12) - 5025 Thacher Road, Ojai
- Trinity Pacific Christian School (K-12) - 3964 Greenwood St., Newbury Park
- United Methodist Children's Center, (K) - 1801 Joilet Place, Oxnard
- Ventura Christian (K-5) - 5040 Telegraph Rd., Ventura
- Ventura Missionary Christian Day School (K-8) - 500 High Point Drive, Ventura
- Villanova Preparatory School (9-12) - 12096 Ventura Avenue, Ojai
- West Side Academy (K-12) - 973 La Grange, Newbury Park

4.9.4.2 Private Colleges:

Private colleges are located in Camarillo, rural Santa Paula/Ojai and Thousand Oaks.

- Camarillo:

  St. John's Seminary College - 5012 E. Seminary Rd., Camarillo

- Rural Santa Paula/Ojai:

  Thomas Aquinas College - 10000 N. Ojai Rd., Santa Paula

- Thousand Oaks:

  California Lutheran University - 60 W. Olsen Rd., Thousand Oaks

4.9.5 LIBRARY SERVICES

4.9.5.1 Ventura County Library Services Agency

Ventura County is served by four independent public library jurisdictions: Ventura County Library Services Agency, the City of Oxnard, Santa Paula Union High School District and the City of Thousand Oaks. In addition, the Ventura County Law Library is open to the public.

This section will be limited to a discussion of the County Library Services Agency which provides service to all of Ventura County except Oxnard, Santa Paula and Thousand Oaks. The agency provides to all individuals free access to books, other materials and services to support their informational, recreational, cultural and self-education needs. Most books and materials are available to be loaned to users. Information service is provided by trained staff. In addition, an Adult Literacy Program operates at multiple sites using one-to-one tutoring with trained volunteers.

Seventeen community libraries, special libraries and one bookmobile are operated by the County Library Service Agency. The County Library's administrative office is located at 4274 Telegraph Road, Ventura. Its Central Services operations are located at 651 East Main Street, Ventura. Refer to Figure 4.9.1 for location of branch libraries (map) and Figure 4.9.2 for a description of Library Services Agency libraries.

The goals of the Library Services Agency are to:

- Provide excellent basic public service within the constraints of resources available.
- Strengthen agency staff support.
- Provide safe, clean, well-lighted, attractive, accessible, spacious facilities in good repair.
- Increase public awareness of and support for library services.

4.9.5.2 Black Gold Cooperative Library System

Seven member public libraries in Ventura, Santa Barbara and San Luis Obispo counties share resources and information through the Black Gold Cooperative Library System. The Black Gold Bibliographic Center catalogs books acquired by member libraries, and publishes a union catalog of books for the libraries. The Black Gold Information Center provides backup reference and information service to members.

On August 29, 1978, the Ventura County Board of Supervisors authorized the Library Services Agency to participate in the programs of the California Library Services Act. The Act requires appointment of a community representative to the Black Gold System Advisory Board. Board members play a significant role in helping determine the library services to be given to the residents of the Tri-County area by the Black Gold Cooperative Library System.

4.9.5.3 Ventura County Law Library

The Law Library is located on the first floor of the Hall of Justice at the County Government Center. Its collection of books, journals and other publications are accessible for examination and reading by the public. Its primary use is by the judiciary, State and County officials and members of the Bar Association. This library is governed by the Law Library Board of Trustees, consisting of three Superior Court Judges, one Municipal Court Judge and two members of the Bar appointed by the Board of Supervisors.

4.9.6 FUTURE PUBLIC SCHOOL FACILITIES

Planning for future school facilities appropriately occurs on a district-by-district basis, where local needs and resources can be fully evaluated. However, information available as of 1987 indicated that the principal short-term need is likely to be for construction of new classrooms on existing occupied sites, while long-term needs are for additional sites for new schools and related facilities. At the request of the County Planning Division, the County Superintendent of Schools Office conducted a survey of all County Public Schools in the Summer of 1987, surveying each School District's anticipated school facility needs to the year 2000.

Refer to Figure 4.9.3 for the additional school facilities needed by the year 2000 for each school district, as information to the year 2010 was unavailable at this time.

Effective January 1, 1987, new State Legislation AB 2926 (Stirling) established a State and local partnership for the financing of school construction, declaring legislative intent that the State's share of its financial commitment will be met from such revenue sources as general obligation bonds, tideland oil revenues, and from other sources specified in the bill. AB 2926 also authorizes local school districts to impose fees on residential and commercial developers to finance school construction. Cities and counties would continue to be authorized to levy

fees or require the dedication of land in order to finance specified interim facilities. However, such fees could not exceed $1.50 per square foot for residential development and $0.25 per square foot for commercial and industrial developments.

In September 1987, according to the County Superintendent of Schools Office, of the 20 Public School Districts in the County, 17 School Districts collected AB 2926 school fees. The Santa Clara Elementary School District and the Simi Valley Unified School District currently do not collect school development fees, and Oak Park Unified School collects its school fees by private agreement.

Prior to January 1, 1987, SB 201 permitted each School District to collect school impact fees from the developers of new residential construction with many of the School Districts utilizing school impact fees.

4.9.7 CONCLUSIONS

4.9.7.1 Schools

Planning for future school facilities occurs on a district by district basis. The County's role is to assist public school districts and private schools with administrative, fiscal and education affairs and implementation of special programs and legislative mandates. The General Plan Goals, Policies and Programs should promote the continued exchange of information, such as providing demographic data through the Development Monitoring Program and current development activity to help school districts in estimating future needs.

4.9.7.2 Libraries

With an expanding population, growth in leisure time, higher educational goals and attainment, the public library is an important community facility. It often provides a focal point of education and community awareness. The General Plan Goals, Policies and Programs should provide a means to ensure that a high level of library facilities and services will continue to be provided for existing and future County residents.

REFERENCES

Ventura County Superintendent of Schools Office, 1986-87 Ventura County Public Schools Directory.

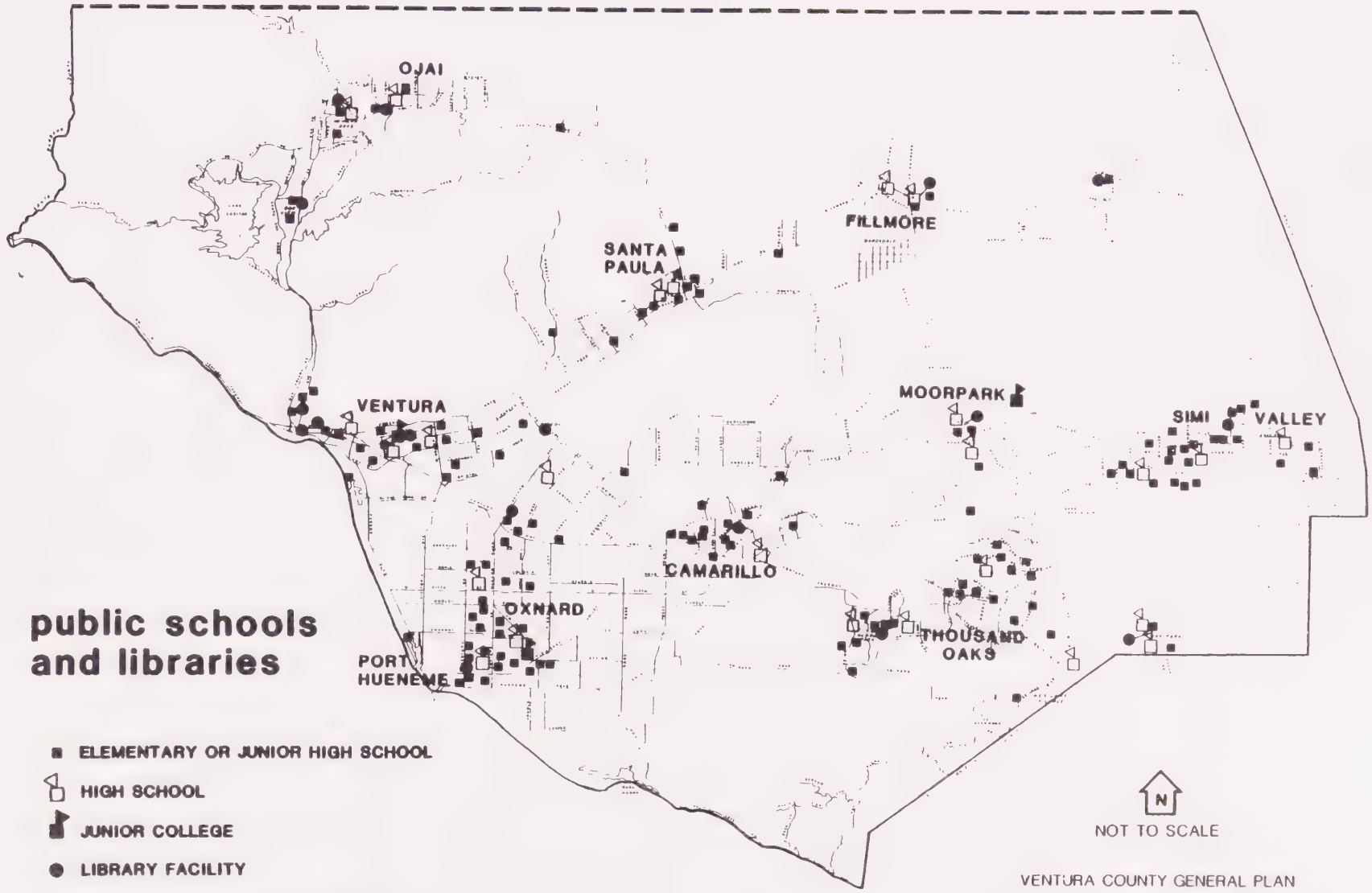
Ventura County Superintendent of Schools Office, Private and Parochial Schools in Ventura County 1990-91.

Library Services Agency Goals and Objectives 1986-87.

Ventura County Superintendent of Schools Office Goals and Objectives 1986-87.

INDIVIDUALS CONSULTED

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Tom Kimberling, Ventura County Community College District
Robert Smith, Ventura County Superintendent of Schools



VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.9.1

FIGURE 4.9.2
VENTURA COUNTY LIBRARY SERVICES AGENCY - LIBRARIES

	Number of Volumes
ADMINISTRATION 4274 Telegraph Rd. Ventura 93003	N/A
AVENUE LIBRARY 807 N. Ventura Ave. Ventura 93001	18,700
BOOKMOBILE-OUTREACH SERVICES 4274 Telegraph Rd. Ventura 93003	Varies
CAMARILLO LIBRARY 3100 Ponderosa Dr. Camarillo 93010	97,400
EL RIO LIBRARY 2810 Jourdan St. El Rio 93030	18,800
FILLMORE LIBRARY 502 Second St. Fillmore 93015	27,000
E. P. FOSTER LIBRARY 651 E. Main St. Ventura 93001	112,200
GOVERNMENT CENTER REFERENCE LIBRARY 800 South Victoria Ave. Ventura 93009	12,751
HISTORICAL MUSEUM LIBRARY* 100 E. Main St. Ventura 93001	
MEINERS OAKS LIBRARY 114 N. Padre Juan Ave. Meiners Oaks 93023	15,800
MOORPARK LIBRARY 699 Moorpark Ave. Moorpark 93021	31,100
OAK PARK LIBRARY 899 N. Kanan Rd. Agoura 91301	17,800
OAK VIEW LIBRARY 473 N. Ventura Ave. Oak View 93022	17,800
OJAI LIBRARY 111 E. Ojai Ave. Ojai 93023	43,500
PIRU LIBRARY 3811 E. Center St. Piru 93040	11,500
PORT HUENEME LIBRARY 510 Park Ave. Port Hueneme 93041	45,200
SATICOY LIBRARY 11158 Violeta St. Saticoy 93004	14,700
SIMI VALLEY LIBRARY 2969 Tapo Canyon Rd. Simi Valley 93063	143,900
H. P. WRIGHT LIBRARY 57 Day Rd. Ventura 93003	96,800

*Cost of staffing shared by the Ventura County Historical Society
N/A = Not Applicable
Source: Ventura County Library Services Agency, 1990

R.12/10/91

FIGURE 4.9.3

ADDITIONAL SCHOOL FACILITIES FOR VENTURA COUNTY
PUBLIC SCHOOL DISTRICTS NEEDED BY YEAR 2000

ELEMENTARY SCHOOL DISTRICTS	
Briggs Elementary School District	None Indicated
Hueneme Elementary School District	None Indicated
Mesa Union Elementary School District	Mesa Union School District has an 11-acre parcel of land in Strickland Acres for future facility development.
Mupu Elementary School District	None Indicated
Ocean View Elementary School District	1 Elementary School K-5, Ormond Beach area
Oxnard Elementary School District	4 Elementary Schools K-6 1 Intermediate School 7-8
Pleasant Valley Elementary School District	Additions will be made to existing schools. Also, potential for 1 Elementary School, K-6 in Eastern Camarillo
Rio Elementary School District	2 Elementary Schools K-6 1 Intermediate School 7-8
Santa Clara Elementary School District	None Indicated
Santa Paula Elementary School District	Kindergarten - 2 classrooms First Grade - 3 classrooms Second Grade - 3 classrooms Third Grade - 3 classrooms Fourth Grade - 2 classrooms Fifth Grade - 2 classrooms Library Facilities - 2 rooms Multi-Purpose Room - 1 Cafeteria - 1 District Office - 1
Somis Union Elementary School District	None Indicated
HIGH SCHOOL DISTRICTS	
Oxnard Union High School District	2 High Schools 9-12 Relocation of Oxnard High School
Santa Paula Union High School District	Current high school may be expanded to house expected enrollment increase.
UNIFIED SCHOOL DISTRICTS	
Conejo Valley Unified School District	2 Elementary Schools K-6 1 Continuation High School 9-12
Fillmore Unified School District	2 Elementary Schools K-5 1 Middle School (6-8) to replace current junior high (7-8) which will then become a part of the high school campus
Moorpark Unified School District	1 Elementary School K-5 1 Middle School 6-8 1 Community High School 18 regular classrooms 12 portable classrooms 1 performing art building 4 shops Modernize Chaparral Middle School Modernize Flory School
Oak Park Unified School District	1 Middle School 6-8 (under construction) 1 Elementary School K-5
Ojai Unified School District	12-15 classrooms K-8 5-7 classrooms 9-12
Simi Valley Unified School District	1 Elementary School K-6 1 Adult Education Center
Ventura Unified School District	Presently working on a study of district facility needs

Source: Ventura County Superintendent of Schools Office Survey, 1990

R.12/10/91

4.10 PARKS AND RECREATION

Park and recreation facilities in Ventura County are provided by a wide array of agencies. These facilities enhance the quality of life of County residents as well as stimulate the County's tourist industry. The following sections discuss the value and need for recreation facilities, the provision of recreation facilities and lastly, present an inventory of existing and proposed facilities within the county.

4.10.1 NEED

A recreation activity usually instills a sense of well-being or fulfillment to those associated with it. This recreation experience can range from the exhilaration of personal achievement involving special skills or talent, to the serenity induced by viewing a dramatic sunset. It can come from the excitement of participation or the enjoyment of watching others at play. The intensity or quality of resultant experience will vary greatly between individuals and within the same individual under different circumstances.

The recreation experience is certainly not restricted to public park areas; nor does the impact of the urban environment stop at the boundary of public land. To achieve an acceptable "living" environment within our urban centers, government should establish an ethic that encourages the blending of public open space, public recreation areas, private recreation installations, and a wide variety of public, commercial and industrial support facilities as integral units of a total plan.

Within urban regions, a definite void exists between the traditionally accepted recreation service provided by local municipalities or special districts, and the areas and facilities supplied by the state and various federal agencies. This void is a result of increased mobility, special recreation interests, intensified population concentrations, and limited amenities in the rural community.

A system of regional recreation areas can help bridge this gap. Regional recreation areas protect and preserve natural resources and provide facilities that offer specialized recreation opportunities to meet the unique needs of the metropolitan area. Generally, facilities involve recreation, arts or cultural activities of a specialized nature, or offer a quality experience not normally provided by local jurisdictions at the neighborhood or community level. The resource protection capability of parks includes providing open space, providing and enhancing water resources and preserving biological, cultural and scenic resources.

A local park, on the other hand, is a facility that provides recreation opportunities, including programmed activities and/or passive leisure facilities to serve the daily needs of a defined neighborhood or group of neighborhoods within an urban community.

Within the unincorporated area of Ventura County, there are some significant areas of population concentration which are outside any district that may have need for local parks. Some of these areas are the Ventura River Valley, El Rio, Saticoy and Piru.

Contrary to many traditional planning methods, the primary factor that determines the service radii of any recreation facility is that condition that can best be identified as "attraction capability." Further, the actual drawing power of any park is not normally established by the park itself, but by the individual activity or interest facilities within that park and the degree to which they satisfy the social and recreation needs

of the projected participants. The size of a recreation area, its actual location, and its basic functions are only contributing factors to the attraction capability of any facility.

Attraction capability also is established by the careful combination of a selected group of recreation activity areas or facilities that cater to the family unit or to the semi-organized social group. It is essential that facilities exhibit an overall design quality that assures easy and convenient access, effective internal circulation, cohesive architectural and landscape treatment, and consideration for the problems of control, operation and maintenance. The ability to maintain consistent visitation is also dramatically influenced by the operational factors of leadership, supervision attitude, quality of maintenance and effective programming.

Recreation demand is difficult to quantify. The physical and climatic resources of any region or sub-region will dramatically affect the participation days per capita in a wide variety of recreation activities. For example, the actual participation days per capita in backpacking, camping, water-oriented activities, snow skiing, ice skating, hunting, spectator sports, cultural events, golf, horseback riding, bicycle riding, surfing and many other leisure pursuits vary substantially in accordance with the climate, topography, extent of urbanization and the availability of unique physical resources within the study area. It can be demonstrated that the resource, whether natural or man-made, contributes to demand. As a general rule, standard participation days per capita that are developed nationally or even statewide, are of limited value in the determination of demand factors at the regional or local level.

People's interest in specific recreation activities and the degree to which they participate in these activities also are determined largely by the existing social and economic conditions that control or influence their daily lives.

The use of facilities and the participation in certain regional recreation activities are affected by public transportation and public access. A significant proportion of the County's population does not have access to recreation facilities due to inadequate private transportation. Groups so affected include the aged, economically disadvantaged, some minority groups, and the young. Certain recreational facilities such as golf courses attract car driving participants from a 10-20 mile service radius and would not be significantly affected by the availability of public transportation. However, picnic areas, County parks and beaches get a significant percentage of their use from within the County, and increased attendance by more segments of the County population could potentially be accomplished by public transportation access to these areas.

The facilities most likely to draw day use from outside the County are the lakes (mainly Casitas and Piru) and the beaches and harbors. These water based activities draw people who live an hour or more from the facility and have accounted for 47% of the use of the harbors. The beach camping areas and the County lakes draw 90% of their users from outside the County, most from the greater Los Angeles area. On the other hand, much of the use of picnic areas and golf courses is by Ventura County residents.

From the south half of the County, the Los Padres National Forest has only one major and two minor access roads. The major road is Highway 33 from Ojai. The two minor roads basically connect the south half of the County to campgrounds and trail heads. They are the Dough Flat Road from Fillmore and the Lake Piru Road to Blue Point Campground and trail head.

Within Los Padres National Forest are the Gridley Canyon, Pratt and Foothill trails which are relatively accessible and have no major problems associated with public easement.

There are other trail heads from the south half of the County to the forest which pass over private property, and no public easement or guarantee of continued public use has been secured. Therefore, all use of these trails is actually or potentially subject to interruption from the property owners. A method of obtaining public access should be secured to allow for the increasing public demand for outdoor recreation provided by the National Forest. These trail heads provide the most accessible avenue for the vast majority of the County's population to the extensive trail system of the Forest.

4.10.2 PROVISION OF RECREATION FACILITIES

Within Ventura County many agencies provide recreation facilities. The cities and Recreation and Park Districts focus on providing local park facilities. Federal, State and quasi-public agencies primarily provide regional facilities. The County of Ventura provides regional facilities Countywide and local facilities in unincorporated urban areas. Regional and local facilities are distinguished as follows:

A regional recreation area is an extent of land which, by its unique natural character or unusual or extensive development, offers recreation opportunities that attract visitors from beyond the local vicinity without regard to physical, political or municipal boundaries.

A local park provides facilities to serve the daily needs of a defined neighborhood or group of neighborhoods within an urban community. Local parks should be able to provide at least three main types of recreation: open areas for passive recreation and relaxation; active sports areas for baseball, basketball and other court games; and a neighborhood center for groups such as Boy Scouts, senior citizens, craft classes, etc. The specific facilities should be determined by needs of the community.

Three special Recreation and Park Districts provide local recreation services to urban residents. The Pleasant Valley Recreation and Park District, the Conejo Recreation and Park District, and the Rancho Simi Recreation and Park District serve the incorporated municipalities of Camarillo, Thousand Oaks, and Simi Valley, and unincorporated areas located adjacent to their primary cities. Figure 4.10.1 shows the service areas of these districts. A number of unincorporated urban areas exist that are not within the jurisdiction of the cities or of special districts. Over 88,000 people currently reside within the unincorporated territory of Ventura County. Although some of these people receive recreation services from the existing special districts, areas such as the Ventura River Valley, El Rio, Casitas Springs, and Piru, for example, receive recreation services from Ventura County.

In addition to the cities, and Recreation and Park Districts, two independent political jurisdictions provide facilities for recreation use: the Casitas Municipal Water District with its extensive operation at Lake Casitas, and the United Water Conservation District operating facilities at Lake Piru.

The physical setting of Ventura County and its proximity to the Los Angeles metropolitan area has inspired the State of California to acquire and develop extensive recreation facilities along the coastal shoreline to relieve the continuous impact generated from out of County visitors. Ventura River Group Camp, McGrath, and Point Mugu State Parks provide overnight accommodations and specialized facilities of statewide

significance. Lake Casitas and Lake Piru are also heavily used by this regular influx of visitors from the Southern California metropolitan region. The Hungry Valley State Vehicular Recreation Area is a 18,780 acre heavily used off-road vehicle use area which straddles the Los Angeles/Ventura County Line in the northeast corner of the County. Open vehicular use, trail use, competitive events and camping take place there.

In addition to State and local facilities, various Federal facilities are located within the County. The U.S. Forest Service affords recreational resources of statewide significance within its extensive holdings in the Los Padres National Forest. The Santa Monica Mountains National Recreation Area and Channel Islands National Park are also located within the County.

Regional services that emphasize day use activities are also provided by each of these levels of government. Both Lake Casitas and Lake Piru offer launching facilities for a variety of boating activities, fishing, and day use picnic areas. The State of California operates day use beaches at San Buenaventura State Beach Park, McGrath State Beach, and Point Mugu State Park.

Recreational boating, sport fishing and swim beaches are provided at the County's two ocean marinas. Channel Islands Harbor in Oxnard is operated by the Ventura County General Services Agency. The Harbor holds 2,300 small craft and future expansion is being planned. Ventura Harbor is operated by the Ventura Port District. Both offer commercially operated recreation activities such as sport fishing, tours, scuba diving and sailing.

The County of Ventura provides recreation services through the General Services Agency. Generally, County policy is to primarily provide regional facilities which serve all residents of the County, and secondarily, to provide local recreation facilities in unincorporated urban communities. The County local park program includes community centers in El Rio and Casitas Springs and community centers with local parks in Oak View, Saticoy and Piru.

With regard to regional park facilities, the General Services Agency, Recreation Services is pursuing development of a County Regional Recreation Areas Plan. When adopted, this plan will identify facility needs, establish criteria for facility development and delineate priorities for new facilities. The County currently owns 24 regional parks.

4.10.3 RECREATION INVENTORY

The following contains a listing of existing and proposed regional recreation facilities within Ventura County. Federal facilities are described below. State, County, quasi-public and local facilities are described in tabular form in the following Figure 4.10.2. and are mapped on Figure 4.10.3.

Los Padres National Forest (LPNF): The LPNF covers the majority of the northern half of Ventura County. As part of the Forest Services Multiple Use Management strategy various recreation facilities are provided, including hiking, equestrian and off-road vehicle trails and camping areas accessible by road and trail. Figure 4.10.4 depicts recreation sites in the Forest. There are 57 dispersed trail camps, 19 developed family campgrounds and one developed group campground. There are many miles of recreation roads utilized by visitors as scenic drives and by off-highway-vehicle enthusiasts. The Forest has inventoried 373.7 total miles of trails. This includes 17.7 miles of the Piedra Blanca National Recreation

Trail which begins at Reyes Creek Campground and ends at Lion Campground. Other special recreational areas include wilderness and shooting areas. Currently, approximately 9,500 acres of the Dick Smith Wilderness is located in Ventura County. Major areas in the North Half are closed to shooting. The largest area includes the Sespe Condor Sanctuary.

Santa Monica Mountains National Recreation Area: In November 1978, Congress established the Santa Monica Mountains National Recreation Area (SMMNRA). In passing this legislation, Congress recognized both the significant natural and scenic qualities of the Santa Monica Mountains and their potential to serve the recreational needs of the people of this region. The National Park Service has been given the responsibility for planning, land acquisition, and management of this new national recreation area. The State Santa Monica Mountains Conservancy also manages open space within the SMMNRA.

SMMNRA encompasses approximately 150,000 acres in the Santa Monica Mountain range in Southern California (Los Angeles and Ventura Counties). This range extends east-west for 47 miles from Griffith Park to Point Mugu

State Park and averages seven miles across. The area is bounded by the Pacific Ocean on the south, the San Fernando Valley and Thousand Oaks on the north, the Ventura/Oxnard urban area on the west, and the Los Angeles urban complex on the east. The recreation area includes a mixture of private and public lands.

The federal lands within the Santa Monica Mountains National Recreation Area located within Ventura County include:

- Cheeseboro Canyon, a 2,000+ acre area located north of the 101 Freeway, which stretches across the Los Angeles County Line. Between 1,700-1,800 acres are located in Ventura County.

- Rancho Sierra Vista/Satwiwa is located south of Potrero Road and north of Point Mugu State Park.

- Malibu Springs, located north of the Leo Carillo State Beach on the Ventura County side. (A portion of Leo Carillo State Beach is located in Ventura County.)

- Circle X Ranch, a 2,000 plus acre area, stretching from the Ventura County Line, northwest into the Boney Mountain State Wilderness Area.

Channel Islands National Park Visitor Center: This center is located at 1901 Spinnaker Drive, Ventura and contains photo displays, exhibits, Chumash Indian artifacts, simulated Caliche ghost forest, indoor tidepool and a native plants display. The visitor can purchase publications, maps and nautical charts at the bookstore and view a 25 minute film, which introduces the National Park.

Five of the eight Channel Islands and surrounding six miles of ocean off of the southern California coast, comprise the Channel Islands National Park and National Marine Sanctuary. Anacapa Island is the only Channel Island considered a part of Ventura County.

Anacapa Island: The smallest, closest, and most visited of the Channel Islands, and part of the National Park System, is located 11 miles southwest of Oxnard and 14 miles southwest of Ventura. Anacapa is composed of three small islets inaccessible from each other except by boat. The islands are nearly 5 miles in length but are only about 1 square mile in area.

Perpendicular cliffs along the shore rise to 250 feet. Anacapa is particularly noted for spring wildflower displays, tidepools, and seabird rookeries. Perhaps the best known feature is the freestanding arch at the island's eastern end. In relationship to the size of the island, its vegetation is the most pristine of all the Channel Islands.

West Anacapa Island is closed to the public to protect nesting California Brown Pelicans. On West Anacapa a short trail leads from Frenchy's Cove to tide pools on the southside of the island; the rest of the island is a research natural area and is closed to visitor use.

Middle Anacapa has no structured landing area and no facilities except for shoreline areas accessible to boaters. It will continue to be closed to general visitation, primarily to preserve the rare plant communities. Middle Anacapa has the largest nesting colony of Western Gulls and the most intact native Bunch Grass community of all the Channel Islands.

Most visitors go to East Anacapa Island, where there is a small visitor center. Picnicking and overnight camping is allowed only on East Anacapa. The U.S. Coast Guard operates a lighthouse and fog horn on East Anacapa Island. The APCD operates an air and weather monitoring station and the County operates a radio communication system used by the Fire Protection District and Sheriff's Department. A small visitor center, primitive campground, pit toilets, and picnic table comprise the visitor facilities.

4.10.4 CONCLUSIONS

The following points summarize the main issues discussed above:

- Demand for recreation facilities exists and will increase with population.
- Cooperation between agencies can enhance recreational use of existing facilities.
- Development may obstruct access to trails and public lands.

In addition, CEQA requires review of development projects for impact to recreation facilities and opportunities. In order to address the above issues the County should pursue the following through General Plan Goals, Policies and Programs:

- The County should plan for the provision of recreation facilities.
- Alternative funding services should be explored as revenues for park development are limited.
- Implementation of the County Parkland Dedication Ordinance should be continued.

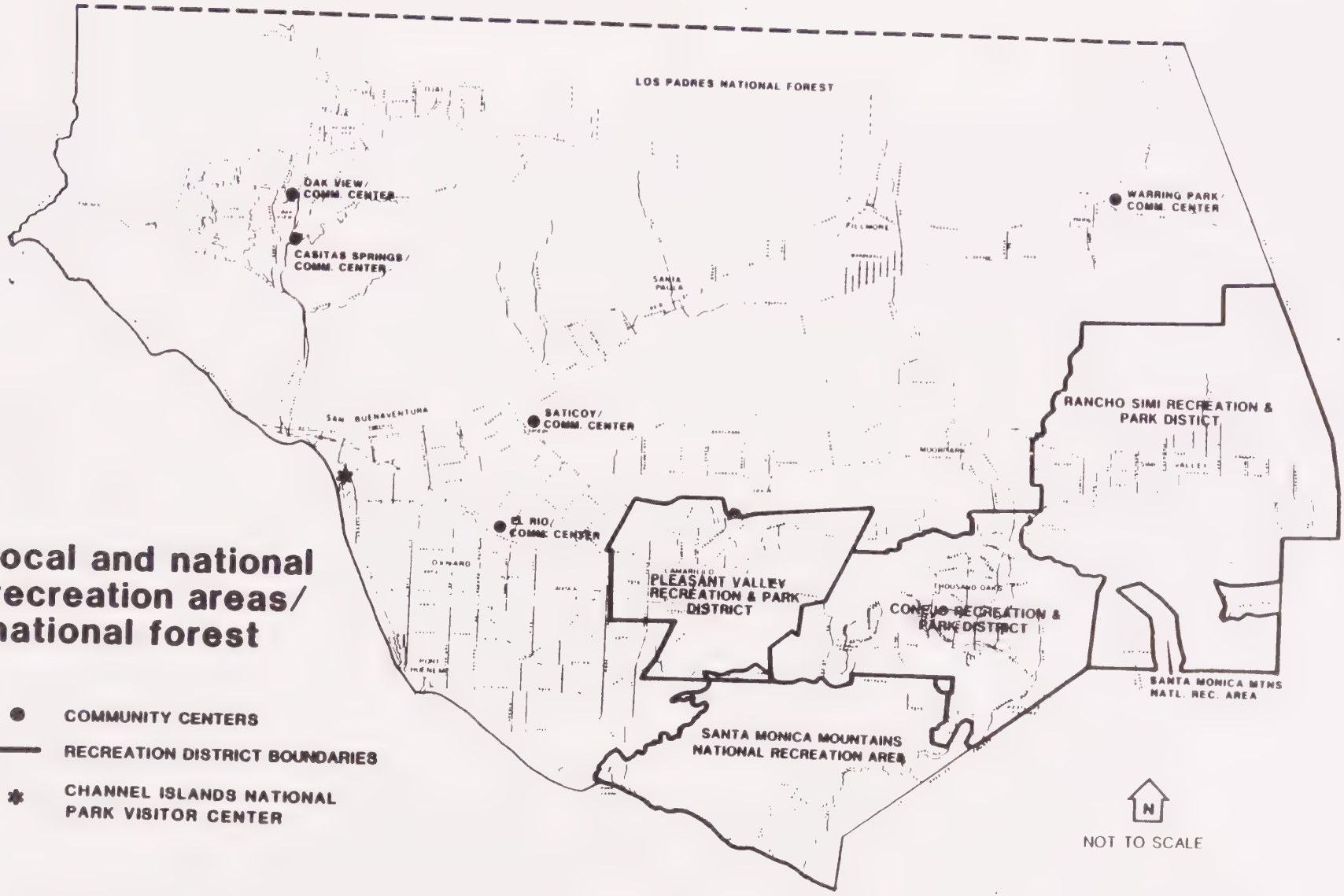
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- Rancho Simi Recreation and Park District, 1986 General Plan
- U.S. Department of Interior/National Park Service, Channel Islands National Park General Management Plan, Vol. 1, November 1984
- U.S. Department of Interior/National Park Service, Santa Monica Mountains Land Protection Plan, 1987
- Ventura County Planning Division and Property Administration Agency, Draft Recreation Element, 1978
- Ventura County Planning Division, Ventura County General Plan Recreation Element, 1968

- Ventura County Property Administration Agency, Draft Regional Recreation Areas Plan, 1984

INDIVIDUALS CONSULTED

- Ron Blakemore, General Services Agency
- Nancy Ehorn, Santa Monica Mountains National Park Recreation Area
- Nicholas Whelan, Channel Islands National Park Ranger



local and national recreation areas/ national forest

SOURCE: VENTURA COUNTY PLANNING DIVISION

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.10.1

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Figure 4.10.2
Regional Recreational Facilities

Name	Agency	Amphitheatre (Bowl)	Auditorium	Botanical Garden	Day Use Beach	Equestrian Center	Fairground	Golf Course	Historical Site	Marina	Marksmanship Range	Museum, Arts/Conference	Model Planes/Ultra Lights	Nature Center	Organized Group Camping	Picnic Grounds	Picnic Grounds/Group	RV Camp	Sports Center	Tent Camping	Trail	Vista Point	Water Sports
Arroyo Simi Eq. Ctr	K&O					✓									✗	✗					✓		
Buenaventura (GC)	F							✓									✓						
California Botanic Garden	J			✓																			
Dennison	B															✓		✓			✗	✓	
Camarillo (Hospital Site)	B	✗				✗							✗				✗				✗		✗
Camarillo Grove	B															✓	✓						
Camarillo Springs (GC)	P							✓															
Camp Comfort	B															✓	✓	✗		✗			
Camillo	A													✓	✓	✓		✓		✓	✓		
Channel Islands Harbor	B															✓							
C I Natl Pk/Marine Sanct.	S													✓	✓	✓				✓	✓	✓	✓
Chesebro Canyon	S																				✗		
College	B	✗															✓	✗					
Conejo Creek	J&O					✗										✓	✗		✓		✓		
Conejo Comedor	S&J																				✓		
Conejo Valley	J														✓	✓	✓						
Corrigarville	K								✓						✓	✓					✓		
Elkins (GC)	P							✓															
Emma Wood	B&A				✓										✓			✓		✓			
Fana Camp	B																✓						
Foster	B	✓				✗			✗							✓	✓	✓		✓	✗		
Happy Camp	B	✗				✗		✗				✗			✗	✗	✗	✗	✗		✗		
Hobson Camp	B																	✓					
Hollywood	B				✓																		
Hueneme	H				✓											✓	✓						
Hueneme Cultural Center	H		✓																				
Hungry Valley OSV	A																	✓			✓		✗
Kenny Grove	B															✓	✓	✓			✗		
Lake Casitas	L	✓								✓			✓		✓	✓	✓	✓		✓	✓	✓	✓
Lake Piru	M									✓					✓	✓	✓				✓		✓
Las Posas (CC)	P							✓															
Los Robles (GC)	T							✓													✗		
Mandalay	B&A				✓							✗		✗	✗						✗		
Matilija Hot Springs	B														✓								
McGrath State Beach	A				✓									✓				✓		✓	✓		
Montgomery Ranch	K															✗					✗		
North Ranch (GC)	P							✓															
Oak	B												✓		✓	✓	✓				✗		✗
Ojai Valley (CC)	P							✓															
Ojai Valley Trail	B				✓																✓		
Olivas	F								✓							✓							
Olivas Park (Municipal) (GC)	F							✓															
Ormond Beach	G				✗									✗		✗					✗		
Oxnard Civic Auditorium	G		✓																				
Oxnard State Beach	G&A				✓									✗		✗					✗		
Point Mugu	A				✓											✓		✓		✓	✓		
Ranch Sierra Vista/Satwiwa	S&A								✗			✗		✓		✓		✗		✗	✓	✗	
Rincon Parkway	B				✓													✓					

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Figure 4.10.2 (continued)
Regional Recreational Facilities (continued)

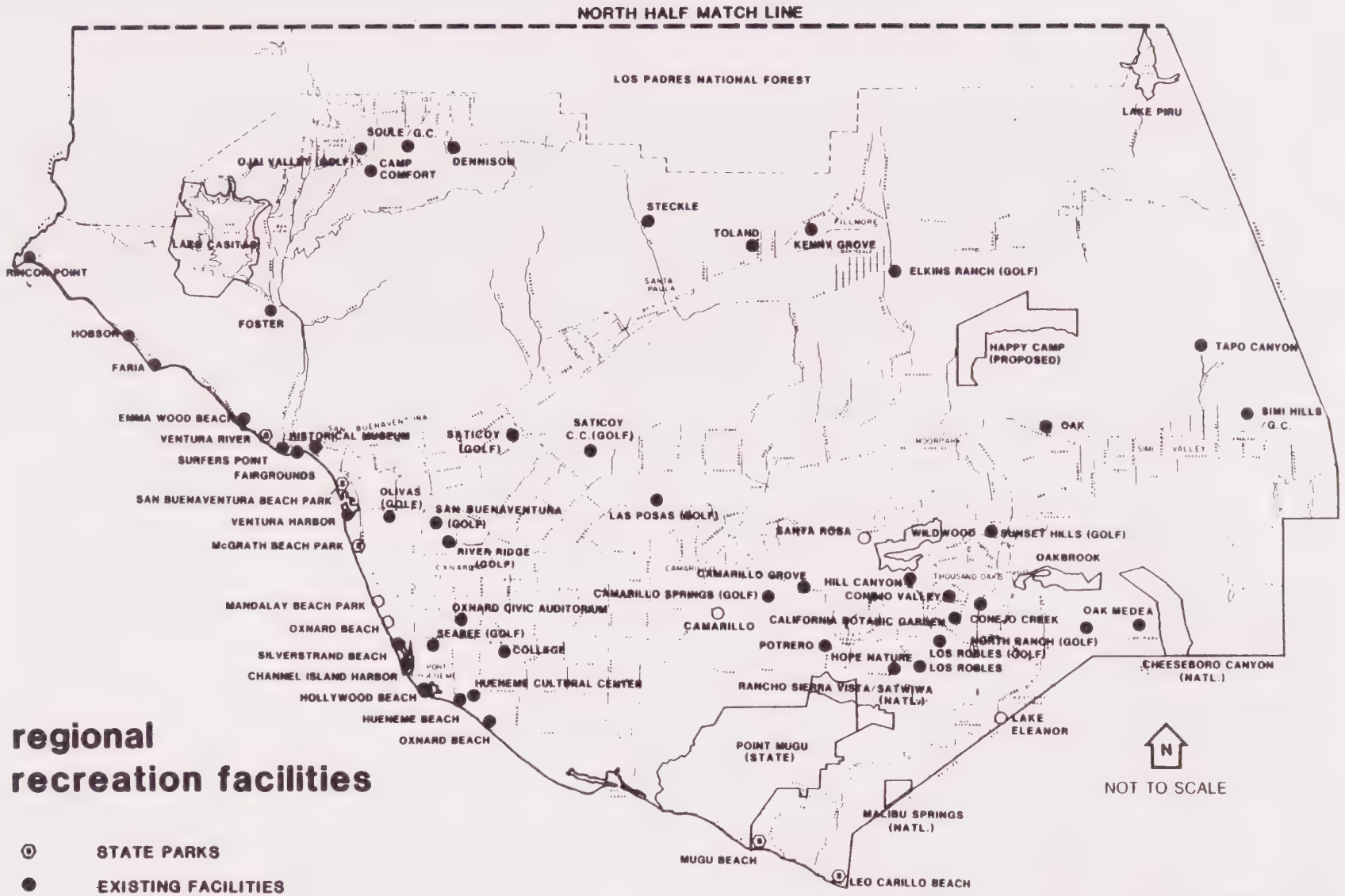
Name	Agency	Amphitheatres (Bowl)	Auditorium	Botanical Garden	Day Use Beach	Equestrian Center	Fairground	Golf Course	Historical Site	Marina	Marksmanship Range	Museum, Arts/Conference	Model Planes/Ultra Lights	Nature Center	Organized Group Camping	Picnic Grounds	Picnic Grounds/Group	RV Camp	Sports Center	Tent Camping	Trail	Vista Point	Water Sports
Rincon Point	A				✓																	✗	✗
River Ridge	G							✓													✗		
San Buenaventura Beach	A				✓											✓	✗						
Saticoy (CC)	P																						
Saticoy (GC)	B							✓															
Seabee (GC)	O							✓															
Silverstrand	B				✓																		
Simi Hills (GC)	K							✓															
Simi-Lake Piru Corridor	K																				✗		
Soule	B							✓								✓	✓						
Steckel	B													✓	✓	✓	✓				✓		✓
Sunset Hills (CC)	P							✗															
Surfers Point	F				✓																		
Tapo Canyon	B					✓																	
Toland	G					✗									✗	✓							
Ventura Harbor	V				✓					✓						✓							✓
Ventura County Fairground	O						✓																
Ventura County Historical	B												✓										
Ventura River Group	A				✓										✓								
PRESERVES/REGIONAL OPEN SPACE																							
Chumash	K			✗					✗					✗		✗						✗	
Hill Canyon	J & T																						
Hope Nature	J																						
Joel McCrea	J																						
Lake Eleanor	W																				✗		
Los Padres Natl Forest	N														✓	✓		✓		✓	✓	✓	
Los Robles	T								✗														
North, South Ranch	W																				✗		
Oakbrook	B																				✓		
Oak-Medea Creek	K																				✓	✓	
Oak Park Pub Open Space	K																				✓	✓	
Portrero	J																				✓	✓	
Santa Clara Estuary	A&G																						
Tapo Canyon	A															✓					✓		
Wildwood	J														✓	✓					✓	✓	

Key

A = State of California
B = County of Ventura
C = City of Ojai
D = City of Santa Paula
E = City of Fillmore
F = City of San Buenaventura
G = City of Oxnard
H = City of Port Hueneme
I = Pleasant Valley Rec & Pks District
J = Conejo Rec & Pks District
K = Rancho Simi Rec & Pks District
L = Casitas Municipal Water District
M = United Water Conservation District
N = Los Padres National Forest
O = Other Public
P = Private
S = National Park Service
T = City of Thousand Oaks
V = Ventura Port District
W = Conejo Open Space Conservation Agency
✓ Existing Facilities
✗ Proposed Facilities
(GC) Golf Course
(CC) County Club

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regional recreation facilities

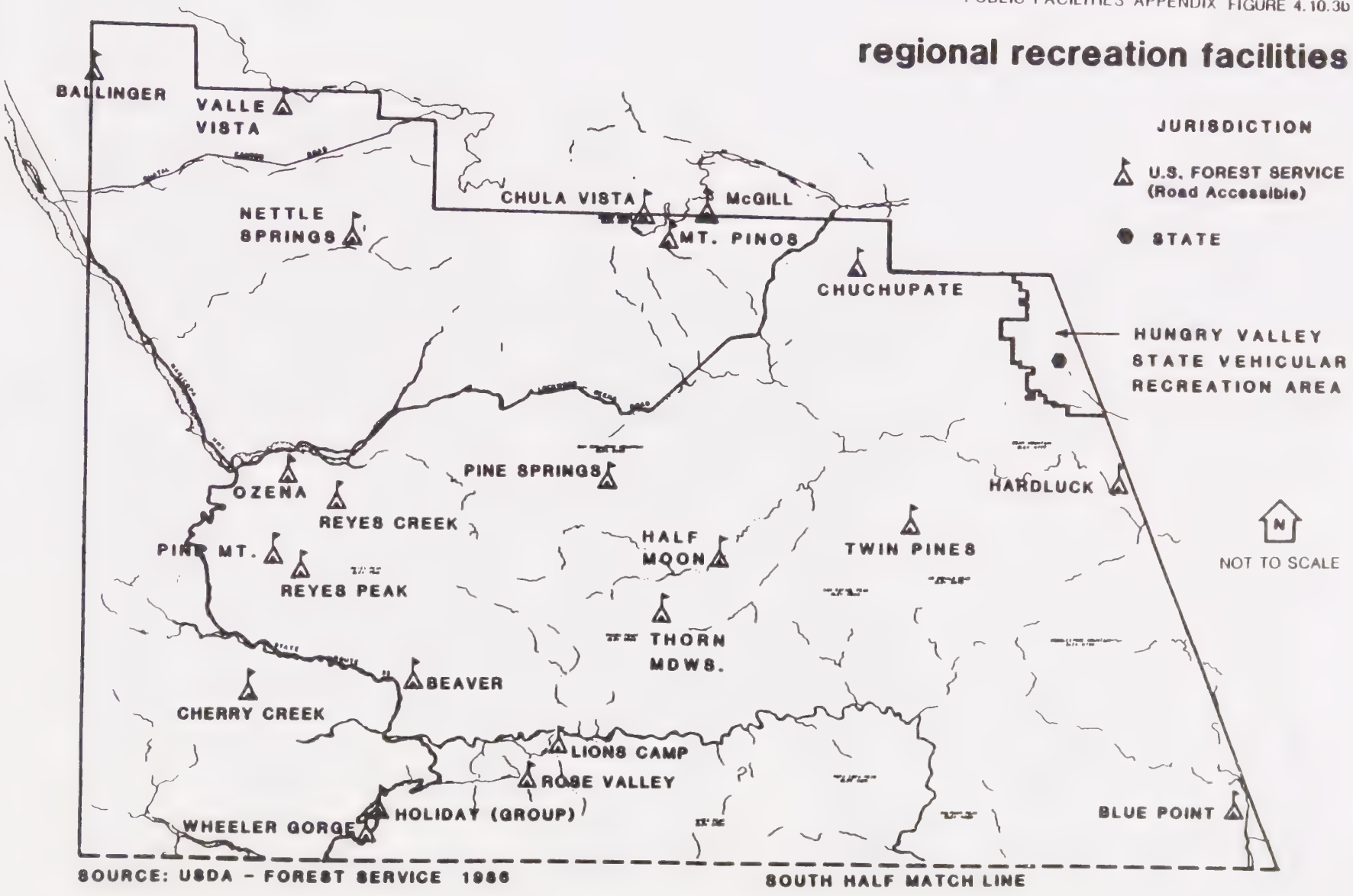
- ⊙ STATE PARKS
- ● EXISTING FACILITIES
- ○ PROPOSED FACILITIES

SOURCE: VENTURA COUNTY PLANNING DIVISION
DATE: SEPTEMBER 1987

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.10.3 a

regional recreation facilities



4.11 OTHER PUBLIC BUILDINGS AND GROUNDS

This section discusses other public buildings and grounds including those Federal, State or County buildings, facilities and grounds that are not described in earlier portions of this Public Facilities and Services Appendix.

4.11.1 FEDERAL INSTALLATIONS, FACILITIES AND LANDS

Federal installations, facilities and lands vary from defense installations (Point Mugu Pacific Missile Test Center/Naval Air Station and Port Hueneme's U.S. Naval Construction Battalion Center) to recreation and conservation oriented facilities and lands including the Los Padres National Forest and San Nicolas Island. These are described below. The Santa Monica Mountains National Recreation Area, Anacapa Island and the Channel Islands National Park Visitor Center are discussed in Section 4.10 on Parks and Recreation.

4.11.1.1 Point Mugu Pacific Missile Test Center and Naval Air Station

The 4,500 acre Point Mugu facility is located at the western end of the agricultural lands of the Oxnard Plain, six miles southeast of Oxnard. The Ventura County and Point Mugu Game Preserves (private clubs not associated with the Navy) are located to the northwest of the base with the Camarillo State Hospital four miles northeast. The base is flanked by the Santa Monica Mountains on the east and the Pacific Ocean to the south. Approximately 8,000 military and civilian personnel work at Point Mugu with an additional 3,000 dependents living in the area near the base.

The Pacific Missile Test Center (PMTC) develops and tests missile systems for the Fleet. In its traditional role of test and evaluation, PMTC is the Navy's primary facility for air launched weapons. However, other mission areas have expanded and now provide new challenges. These areas include Fleet operations support and training, engineering cognizance and in-service engineering, and increasing support for surface launched weapons. In addition, Pt. Mugu is the home to many other commands that perform a variety of functions.

The main base complex houses extensive test laboratory and support facilities, and has two runways capable of handling all modern aircraft types. The larger tenants of Point Mugu include: Air Test & Evaluation Squadron Four (UX-4), Navy Astronautics Group, Tactical Electronic Warfare Squadron, Three Four (VAQ-34), Antarctic Development Squadron Six (UXE-6), Marine Aviation Detachment, and the Point Mugu Naval Reserve Forces consisting of Naval Air Reserve (NAVAIRES), Patrol Squadron SIXTY-FIVE (VP-65), Attack Squadron (VA-305), Helicopter Attack (Light) FIVE (HAL-5). There are many more smaller reinforcing units and squadrons representing almost all aspects of Naval Aviation. For further information on the Point Mugu Naval Air Station, refer to Section 4.2.4.2.

4.11.1.2 Naval Construction Battalion Center Port Hueneme

Another Federal defense installation in Ventura County is the U.S. Naval Construction Battalion Center (Seabee Center), with a staff of about 10,000 persons on over 1,600 acres of land located within the City of Port Hueneme. The Center is a training site, mobilization center and home port for the 31st Naval Construction Regiment, with its four battalions of the Navy Seabees (NMCB-3, -4, -5 and 40), two Reserve Battalions (RNMCB-14 and -17), and an Underwater

Construction Team (UCT-2). The Center's Supply Department maintains an inventory of equipment and material to support mobilizations or relief for national disasters, as well as maintain the everyday operation of the Center and its tenants.

Major tenants of the Seabee Center include the Naval Construction Training Center, Naval Civil Engineer Corps Officers School, Naval Energy and Environmental Support Activity, and Naval Support force antarctica.

The Naval Civil Engineering Laboratory (NCEL) is also located in the City of Port Hueneme. NCEL is the Navy's principal RDT&E center for shore facilities, fixed surface and subsurface ocean facilities, and for the Navy and Marine Corps construction forces. It occupies 32 acres and maintains a staff of over 400 military and civilian personnel.

The largest tenant command on the Naval Construction Battalion Center is Naval Ship Weapon systems Engineering Station, a field activity of the Naval Sea Systems Command, Washington, D.C. The Station provides in-service engineering support and logistics support to more than 320 combatant, amphibious and auxiliary ships of the U.S. surface fleet. The Station also provides assistance to ships of several friendly nations equipped with surface-to-air and surface-to surface weapon systems. Station personnel number about 2,550, including 100 military officers and enlisted.

4.11.1.3 Los Padres National Forest

The Los Padres National Forest covers 555,618 acres or 868.15 square miles of the 1,884 square mile area of Ventura County (approximately 46% of the land area of the County).

Facilities within Los Padres National Forest include roads, trails, campgrounds, dams and buildings. Travel into and around the Forest is provided by a network of highways. For the portion of the Forest in Ventura County, access is provided by U.S. 101, California State Highways 33, 126, 150 and the County's Lockwood Valley Road. The Interstate 5 Highway located in Kern and Los Angeles Counties provides access just east of the Forest. Trails serve foot, horse, mountain, bicycle, or motorcycle traffic, and are managed for user safety, resource protection, and to meet recreation objectives. The Matilija Reservoir (no longer in use) and the upper reaches of Lake Piru lie within the Forest. Santa Felicia Dam (Lake Piru) and Lake Casitas are all located downstream from the Forest boundary.

The major facilities include the Mt. Pinos District Ranger Station (with helipad) in Chuchupate (west of Fraizer Park in the Cuddy Valley area), plus Forest Service facilities at Oat Flat (north of Fillmore near the Sespe Oilfields), Wheeler Gorge (Highway 33 north of Ojai near Wheeler Springs), Ozena (Highway 33 near Junction of Lockwood Valley Road), Temescal (northeast of Piru adjacent to Lake Piru), and the Casitas Fire Station (with helipad) on the west side of Lake Casitas. The Ojai District Ranger Station (in the City of Ojai) is located south of the Los Padres National Forest.

4.11.1.4 San Nicolas Island

The 14,000 acre (21.9 square miles) island is located approximately 60 miles off the coast of Point Mugu. San Nicolas Island is part of the Navy's Pacific Missile Test Center Sea Test Center.

Approximately 350 employees, including military and civilian, staff the outlying landing field and the Naval Facility at San Nicolas Island.

San Nicolas Island is the site of about $30 million worth of communication and missile-tracking instrumentation operated by the Pacific Missile Test Center (PMTC) Range Directorate. San Nicolas' 10,000 foot runway with ground-controlled approach facilities, accommodates supersonic target aircraft and planes from the mainland during operations. The island offers an unobstructed area over which the Navy can test its new weapons system. Most PMTC activity is conducted over a rectangular area of ocean 200 miles long and 80 miles wide with the majority of operations conducted between San Nicolas Island and Point Mugu.

San Nicolas Island is one of California's key wildlife and environmental preservation areas. The natural resources of San Nicolas Island are managed by a joint agreement among the Department of the Navy, Department of the Interior, and California's Department of Fish and Game. Unique animals on San Nicolas Island include a small species of fox, the *white-footed deer mouse*, the *island night lizard* and the *rock wren* among others.

The *western gull* is another protected species that inhabits the island. They are located in the area designated as the Western Gull Rookery. San Nicolas also provides a breeding area for sea lions and sea elephants and is one of the few places in the world where both species occur naturally. Fish in the waters are a mixture of northern and southern species, including the *yellow tail* and *rock bass*.

4.11.2 STATE FACILITIES AND LANDS

State public facilities and lands include the Camarillo State Hospital and California State Youth Authority (Ventura School). The Hungry Valley State Vehicular Recreation Area and the various State parks and beaches are discussed in the Parks and Recreation Section 4.10.

4.11.2.1 Camarillo State Hospital

Camarillo State Hospital, built in 1936, is located four miles southeast of Camarillo on a 976 acre site, with the farm portion of 435 acres leased out. The State Hospital is licensed for 1,503 beds for the mentally disabled and developmentally disabled. As of November 1988, approximately 2,100 employees provide service on a round the clock basis to the 1,200 clients housed at the facility (600 mentally disabled and 600 developmentally disabled clients). The majority of the clients are from Southern California.

4.11.2.2 California State Youth Authority (CYA) - Ventura School

Ventura School is located on a 107.4 acre site at the southwest corner of Wright Road and Beardsley Road in El Rio. Approximately 45 acres of the site is fenced. The balance is used for parking, landscaping or is leased to a private party for raising agricultural products.

The site was formerly a Youth Authority institution for female offenders only. It is presently a co-ed institution for youthful offenders, ages 17-25. In 1990, there were approximately 879 youth offenders (595 males and 284 females). Approximately 200 youths

work in the institution's kitchen, laundry, grounds maintenance, warehouse, and serve as tutors in the school program, all within the fenced-in portion of the institution.

4.11.2.3 California State Youth Authority (CYA) - Ventura Public Service and Fire Center

Ventura Public Service and Fire Center is located on 2.6 acres adjacent to Ventura School on Wright Road. It opened in May 1990. It is a conservation camp operated by the Department of the Youth Authority in cooperation with the California Department of Forestry. As of June 30, 1990, there were approximately 83 male youth offender's housed at this institution. Employees and the residents provide conservation and emergency fire suppression work throughout Ventura County.

4.11.3 OTHER VENTURA COUNTY BUILDINGS AND FACILITIES

This section describes other owned or leased Ventura County buildings and facilities not discussed in earlier portions of this Public Facilities and Services Appendix.

The following County agencies and/or departments which either own or lease County buildings and facilities will be described later in this section:

- Agricultural Department (Agricultural Commissioner)
- Animal Regulation Department
- General Services Agency (GSA)
- Information Systems Department
- Health Care Agency (HCA)
- Personnel Department
- Public Social Services Agency (PSSA)
- Public Works Agency (PWA)
- Resource Management Agency (RMA)

To aid the reader, the remainder of the other County buildings and facilities will be described under the County Agency or Department, with a brief description of the services provided at that building or facility and its address.

Since the Ventura County Government Center involves all of the County buildings, facilities and services of every County Agency and Department, the facilities at the Ventura County Government Center Complex are described first. Due to the large number of County owned and leased facilities at Camarillo Airport, a description of these facilities are included.

4.11.3.1 Ventura County Government Center Complex

The County Government Center, located at 800 S. Victoria Avenue, Ventura, is an 80 acre site which contains four major facilities: the Administration Building, Hall of Justice, Criminal Justice Complex and the Service Building. Other smaller facilities include the pump house, motor pool fleet maintenance office and the Public Works Service trailer for Surveying and Roads.

The Government Center was constructed in order to more effectively provide County services to members of the public. The Center consolidates many services which previously were widely scattered throughout the City of Ventura and elsewhere.

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The Government Center was constructed in order to more effectively provide County services to members of the public. The Center consolidates many services which previously were widely scattered throughout the City of Ventura and elsewhere.

The Administration Building includes the following offices:

- o Assessor
- o Auditor-Controller
- o Board of Supervisors Hearing Room (Main Plaza) and Offices (Fourth Floor)
- o Chief Administrative Office
- o Clerk of the Board
- o County Counsel
- o Elections
- o Information Systems Dept.
- o General Services Agency
- o Local Agency Formation Commission (LAFCO)
- o Personnel
- o Public Administrator, Guardian, Conservator
- o Public Works Agency
- o Recorder
- o Resource Management Agency
- o Treasurer
- o Tax Collector

The Hall of Justice consolidates the Municipal and Superior Courts in one location with the various court support functions including Court Clerks, District Attorney, Jury Services, Public Defender, Grand Jury, Law Library, Sheriff's Civil Bureau, and Bail Review.

The Criminal Justice complex is comprised of three service areas: the Ventura County Sheriff's Department; the Main Jail; and the Corrections Services Agency. A separate crime lab building is located east of the Criminal Justice Complex.

The Service Building is located at the northeast corner of the Government Center. Purchasing, Stores, Graphics Print Shop, Custodial, Landscape, Interiors, Chair Repair, Trades, Maintenance, RMA Cross-Connection Lab, Garage, Warehouses for Interiors, and Property Administration (County Auctions) are located at this site.

4.11.3.2 County Facilities at Camarillo Airport

County Airport facilities at Oxnard Airport and Camarillo Airport are described in Section 4.2.4 on Airports. Other County maintained facilities utilizing the various buildings at the 753 acre Camarillo Airport include:

- o 295 Durley Ave.: County Airport Administration Office (Building 233) plus four large hangars, six medium hangars and 242 small hangars

- o 600 Aviation Drive: County Animal Control Complex on a 4.7 acre site includes:

  - Administration Building
  - Veterinarian Building
  - Kennels
  - Quarantine Kennels
  - Barn
  - Utility Building
  - Corral Shelter Building and Corral Area

- o 395 Willis Ave.: Ventura County Fire Protection District Headquarters. Other fire facilities include:

  - Fire Prevention Annex, 460 Houck Street
  - Fire Station #50, 615 Aviation Drive
  - Training Smoke Room, 555 Aviation Drive
  - Fire Communications Center, 355 Post Street
  - Repair Shop for Fire Engines, 575 Aviation Drive

- o 425 Durley Ave.: Ventura County Police and Sheriff's Training Academy

- o 375 Durley Ave.: Sheriff's Hangar
- o 410 Willis Ave.: Work Furlough Buildings, Corrections Services Agency
  - Work Furlough Facility (Bldg. 276)
    Work Furlough Facility (Bldg. 252) (including Dining Hall and Offices)
  - New Building Work Furlough to be built in future
- o 101 Durley Ave.: Chief Administrative Office - storage by various County Agencies (Bldg. 127)
- o 170B Durley Ave.: Airport Maintenance and Storage (Bldg. 137)
- o 365 Willis Ave.: Agricultural Office (Bldg. 257)
- o 275 E. Pleasant Valley Road: County Superintendent of Schools buildings include:
  - Office (Bldg. 161)
  - Gate House (Bldg. 157)
  - Shop Building (Bldg. 155)
  - Motor Shop (Bldg. 179)
  - Wash Rack
  - Auto Maintenance (Bldg. 163)
  - Body & Fender Shop (Bldg. 160)
  - Bank Teller (Bldg. 170)
  - Paint Storage (Bldg. 162)
  - Dental Classroom (Bldg. 164)
  - Service Station (Bldg. 165)
  - Food Service (Bldg. 166)
  - Dental Building (Bldg. 167)
  - Portable Building (Bldg. 168)
  - Special Education (Bldg. 140)
  - Mechanical Occupations (Bldg. 133)
  - Classroom Special Education (Bldg. 135)
  - Auto Body Classroom (Bldg. 141)
  - Library (Bldg. 143)
  - Classroom & Storage (Bldg. 147)

In addition, Oxnard College, Oxnard Union High School District, U.S. Border Patrol, U.S. Navy, Greek Orthodox Church, and Pleasant Valley Parks and Recreation all own facilities at Camarillo Airport and several private airport-related businesses lease facilities from the County.

4.11.3.3 Agricultural Commissioner (Department) Facilities

The Agricultural Commissioner is responsible for enforcing Federal, State and local laws and regulations which relate to the protection of the public health, safety and welfare. This Department prevents fraud and deception in the packaging and marketing of agricultural products; inspects crops to detect and eradicate new and damaging pests; and enforces laws in the use of pesticides.

The main Agricultural Commission Office is in the Agricultural Building at 815 E. Santa Barbara Street, Santa Paula (owned). District offices are located at:

- o Oxnard District: 680 El Rio Drive, Oxnard (owned).
- o Ventura-Ojai District: 1068 E. Main Street, Room 110, Ventura (leased).
- o Camarillo District: Camarillo Airport - Security Building - 275 Pleasant Valley Road #206 (leased).

- Simi Valley-Moorpark District: 2003 Royal, Room 205, Simi Valley (leased).

4.11.3.4 Animal Regulation Department Facilities

The Animal Regulation Department is responsible for the care and housing of sick, injured, abandoned, unwanted and stray animals; the enforcement of animal related State and local laws; and the suppression of rabies through an active quarantine and vaccination program.

The County Animal Control Central Facility is located at the Camarillo Airport on a 4.7 acre site, located at 600 Aviation Drive, Camarillo. County-owned buildings include an Administration Building, Veterinarian Building, Kennels, Quarantine Kennels, Barn, Utility Building, and Corral Shelter Building and Corral Area. The East Valley Holding Facility is located at 670 W. Los Angeles Avenue, Simi Valley (owned).

4.11.3.5 General Services Agency (GSA) Facilities

The General Services Agency was created as a result of a merger of the Support Services Agency with the Property Administration Agency in fiscal year 1985-86. This Agency is comprised of five departments: Administrative Services, Central Services, Risk Management, Facilities and Grounds, and Recreation Services. Some of the responsibilities of this Agency include Facilities Management including Custodial Services, Building Maintenance and Repair, Security and Energy Conservation; Materials Management including Purchasing, Stores, Warehousing, Surplus Property and Graphics Services; and Agency Administration providing general guidance and direction, including the development of policies and procedures. In addition, GSA is responsible for Office Services for Furniture, Inventory Control, Word Processing and Mail Services; Fleet Services including Transportation and Heavy Equipment; and Audio-Visual Equipment; Risk Management providing Risk Analysis, Safety and Claims Programs, General Insurance, Workers' Compensation and the evaluation of all Disability Retirements; and Landscape Services.

GSA's main office is located in the Administration Building, Lower Plaza, County Government Center, 800 S. Victoria Avenue, Ventura. Many of the services provided by Facilities and Grounds are located in the Service Building at the County Government Center. Other GSA facilities include:

- GSA Maintenance and Storage in Bldg. 137 at the Camarillo Airport at 275 E. Pleasant Valley Road (owned).

- Park Patrol Headquarters, Transportation, Fleet Administration, Main Garage, Heavy Equipment Garage, County welding shop West County Parks Maintenance and a custodial shop are located at 682 El Rio Drive, Oxnard (owned).

Channel Islands Harbor Facilities:

- 3900 Pelican Way: Harbor Manager & Patrol
- 3401 Peninsula Ave.: Community Service Bldg.
- 3605 Victoria Ave.: Harbor Maintenance Bldg. & Storage
- 3121 & 3141 Victoria Ave.: Small boat marina, restrooms & yacht sales office
- 2741, 3001 & 4021 Victoria Ave.: Includes launch ramps and restrooms (All County Owned Buildings and Facilities).

In addition, GSA regulates and administers 24 regional and nine local park facilities (identified in Parks and Recreation Section 4.10).

4.11.3.6 Information Systems Department (ISD) Facilities

Communications equipment, operated by the Information Systems Department, includes radio, microwave and telephone switching equipment. They are located at the following sites:

- Anacapa Island - radio/microwave equipment
- Red Mountain - radio/microwave equipment
- South Mountain - radio/microwave equipment
- East Valley Sheriff Station - radio/microwave and switching equipment
- Rocketdyne - radio/microwave equipment
- Camarillo Airport - radio/microwave/switching equipment
- Oxnard PSSA - radio/microwave/switching equipment
- Oxnard Police Dept. - radio/microwave/switching equipment
- El Rio - radio/microwave/switching equipment
- County Government Center - radio/microwave/switching equipment
- County Medical Center - radio/microwave/switching equipment
- Telephone Road County Office Building - microwave/switching equipment
- Ventura College - microwave/switching equipment
- Oxnard College - microwave/switching equipment
- Moorpark College - microwave/switching equipment
- Poli Avenue - Microwave/switching
- Royal Avenue - Microwave/switching

In addition, switching equipment is located in Santa Paula, County Superintendent of Schools and at Poli Street. This communications equipment is utilized by the following County agencies and departments: Sheriff's Department Patrol, Sheriff's Emergency Medical, Fire Protection District, GSA/Radio Electronics, GSA/Central Service/Telephones and Businesses, RMA/Building and Safety, PSSA/Income Maintenance, PWA/Flood Control, PWA/Road Services/Administration, PWA/Engineering, HCA/Alcohol Services, HCA/Substance Abuse/Drugs, HCA/Medical Center, and ISD/Computer Operations.

4.11.3.7 Health Care Agency (HCA) Facilities

Health Care Agency Administration plans for the delivery of appropriate health services throughout the County.

The Health Care Agency components are the Medical Center, Mental Health Services, Public Health Services, Alcohol Services and the Medical Examiner.

The Ventura County Medical Center is a general acute care facility with over 200 beds. The Medical Center provides Comprehensive Neonatal, Emergency and Outpatient Medical Care Programs. Its teaching program is affiliated with the UCLA School of Medicine.

The Critical Care Facility is a joint venture between the County and the State Department of Health Services to remodel and add a four story annex to the Ventura County Medical Center. This is an $11 million project being financed by a State grant and County funds. Begun in Fiscal Year 1979-80, the project will provide 46,000 square feet of additional space and 10,000 square feet of

remodeled space. These improvements will provide Enhanced Central Supply, Room for CT Scan Equipment, Emergency Room, and Prenatal Care Services.

Mental Health Services is responsible, under the Community Mental Health Services Act of the Welfare and Institutions Code, for planning and delivering an array of Mental Health Services.

The Health Department (Public Health Services) is responsible for the protection, maintenance and improvement of public health through collaborative planning and development of an effective community health service program, working with all related and/or concerned organizations and individual citizens.

Alcohol Services Administration is mandated by AB 272 if the County is to receive Federal and/or State funding for Alcohol Services. A core program which includes prevention, identification, non-residential and residential services are provided by the County, either directly or through contract. Alcohol Information Schools are also provided.

The Medical Examiner-Coroner's Office establishes the cause and manner of death in certain categories of suspicious, unusual, unnatural and unexpected deaths as enumerated in the California Government Code, Section 27491.

Drug Abuse Services are mandated under the Community Mental Health Services Act, Division V of the Welfare and Institutions Code. Services include prevention, education and treatment serving all members of the community.

The main office of the Health Care Agency is located at 350 Hillmont Avenue, Ventura (owned); Alcohol Services Office is located at 4561 Telephone Road, Suite 210, Ventura (owned); West County Counseling Center Office is a leased facility located at 793 E. Main Street while the East County Counseling Center is located at 2003 Royal Avenue, Simi Valley (leased); a Drug/Alcohol Counseling Office is located at 323 E. Matilija Street, Ojai (leased); a Health Care Agency Office is also located at 3161 Loma Vista Road, Ventura (owned); and the Medical Examiner/Coroner's Office is located at 3291 Loma Vista Road, Ventura (owned).

Mental Health Services Administration Office is at 300 Hillmont Avenue, Ventura (owned); the Drug Services and Continuing Care/Placement Services is located at 4651 Telephone Road, Ventura (owned). Other Mental Health Service facilities include:

- Mental Health Children's Demonstration at 275 E. Pleasant Valley Road, Camarillo (owned)
- Mental Health Services Oxnard Office is in a new County-owned office building at 1400 Vanguard Drive, Oxnard
- Mental Health Services Simi Valley Office is located at 3150 Los Angeles Avenue, Simi Valley (owned)

All remaining Mental Health Services Facilities are leased and include:

- Mental Health Services Office at 3801 Las Posas Road, Camarillo; a Mental Health and Medical Clinic at 226 High Street, Moorpark; Health Care Agency Offices at 520 W. Fifth

Street, Oxnard; Mental Health Clinics at 530 W. Ojai Avenue, Ojai; a Mental Health Outpatient Clinic at 333 W. Harvard Blvd., Santa Paula; and a Mental Health Clinic at 1459 Thousand Oaks Blvd., Thousand Oaks. Other leased Mental Health Offices are located at: Health Care Agency Medical Office at 3481 Saviers Road, Oxnard; HCA-Family Care Medical Clinic at 917 W. Seventh Street, Oxnard; 722 E. Main Street, Ventura; 620 E. Main Street, Ventura (Forensic Mental Health); and the Mental Health Senior Outreach Center at 738 & 744 E. Main Street, Ventura.

The following are all leased Mental Health Semi-Independent Living Facilities:

- 250 Sharon Lane, Port Hueneme
- 2410 and 2730 Bolker Drive, Port Hueneme
- 1221 and 1230 Isleton Street, Oxnard
- 633 Cedar Street, Ventura
- 186 Leighton Drive, Ventura
- 141, 143 and 147 East Simpson, Ventura

Public Health Services Main Office is located at 3147 Loma Vista Road, Ventura (owned). Satellite Health facilities include: Ventura Public Health Promotion Center, 3212 Loma Vista, Ventura (leased); Oxnard Public Health Center, 1500 Colonia Road, Oxnard (leased); Health Care Agency Medical Clinic, 1320 Maricopa Highway, Suites "D" and "E", Ojai (leased); Santa Paula Public Health Center, 1320 E. Main Street, Santa Paula (leased); Simi Valley Public Health Center, 2003 Royal Avenue, Simi Valley (leased); and Family Care Center, 1150 N. Ventura Avenue, Ventura (leased).

The Ventura County Medical Center Complex is located on a 40 acre site at 3291 Loma Vista Road, Ventura. County-owned facilities include the hospital, clinic, emergency room and cat scan annex which are all located in the hospital. The cafeteria, cafeteria conference room and snack bar area are located nearby the hospital. Other buildings include: Public Health, Mental Health, and Health Promotion Center (HCA Personnel). The remainder of the Medical Center Complex includes: Women's Health Center, Pediatric Clinic, Plant Operations, Supply Storeroom, Genetics Program, Family Care Center, Family Care Annex, Collections and Insurance and Coroner's Office. Juvenile Hall, Juvenile Court, Juvenile Work Furlough, kitchen and dining, storage, boiler and laundry, research lab, Public Health Annex building and other maintenance and Health Department trailers comprise the balance of the Medical Center Complex. Other major buildings are located in the 300 block of Hillmont Street and 3210 Foothill Road in Ventura.

4.11.3.8 Personnel Department Facilities

The Personnel Department is responsible for personnel administration, including recruitment, affirmative action, salary and benefits administration, occupational health, employee training and development and personnel records maintenance.

The Administrative Office of the Personnel Department is located in the Administration Building, Fourth Floor at the County Government Center, 800 South Victoria Avenue, Ventura. The only other facility is a Personnel Office at 950 County Square Drive, Ventura (leased).

4.11.3.9 Public Social Services Agency (PSSA) Facilities

The Social Services Division of PSSA is responsible for the proper administration and delivery of a variety of services. Some of these include information and referral services to Aid to Families with Dependent Children (AFDC), Adult Protection Services, In-House Supportive Services, Out of Home Services to Adults, the Senior Survival Mobile, two Domestic Violence Programs and a Day Care Center. The areas covered under this program area include Welfare Administration, Aid to Families and Children, and General Welfare. Income Maintenance handles funding for administration of the financial aid programs. This unit determines eligibility for AFDC, Medi-Cal, General Relief and the Food Stamp Program. The Aid to Families with Dependent Children, Foster Care (AFDC-FC) Program provides care in Foster Homes, Institutions or certain Adoptive Homes for children who cannot receive care in their own home. The Dependent Children Unit provides financial assistance to families where one or both parents are absent, deceased or incapacitated. The PSSA Welfare Unit administers and provides Social, Welfare and Employment Services to residents of Ventura County. The Area Agency on Aging plans, coordinates and advocates for the development of a comprehensive service-delivery system to meet the short-term and long-term needs of older persons in the County. The Care of Indigents Program provides financial assistance to needy indigent persons who do not qualify for other types of aid. This program provides temporary aid to such persons, usually until they can find employment, qualify for other aid or otherwise resolve their problems. The Social Welfare Assistance Program provides emergency aid to recipients of the Supplemental Security Income/State Supplement Program (SSI/SSP). Aid may be for replacement of household furniture and equipment destroyed through a catastrophic event or to provide housing repairs or pay for moving expenses.

The PSSA Office is located at 505 Poli Street. District Offices for Income Maintenance and Adult Services are located at:

- Oxnard District: 210 South "B" Street, Oxnard (leased)
- Santa Paula District: 1320 E. Main Street, Santa Paula (leased)
- Simi District: 2003 Royal Avenue, Simi Valley (leased)
- Thousand Oaks District: 215 N. Moorpark Road, Thousand Oaks (leased)
- Ventura District: 4651 Telephone Road #100, Ventura (owned) Children's Services are also located at the Ventura District Office

Veterans Services Office is at the County Government Office Complex at 1400 Vanguard, Oxnard (owned).

The Greater Avenues for Independence (GAIN) Program is headquartered at the Administrative Office at 505 Poli Street, Ventura (owned) with Services Offices at:

- Oxnard: 580 E. Third Street, Oxnard (leased)
- Ventura: 110 Olive Street, Suite N, Ventura (leased)

- Simi Valley: 995 Los Angeles Avenue, #123, Simi Valley (leased)

PSSA Hot Meals Program is located at:

- 275 E. Pleasant Valley Road (Bldg. 246), Camarillo (owned) with a Senior Nutrition Kitchen at 2220 Ventura Blvd., Camarillo (owned). Senior Nutrition Meal Site at Golden Age Activity Center is located at 195 Mahoney Avenue, Oak View (leased).

- Senior Nutrition Recreation Center, 550 Park Avenue, Port Hueneme (leased)

- Senior Nutrition Program, 530 W. Main Street, Santa Paula (leased)

Other PSSA Offices at 735 E. Santa Barbara Street, Santa Paula (owned) and at 4721 Market Street, Ventura (leased).

4.11.3.10 Public Works Agency (PWA) Facilities

The Public Works Agency is divided into four departments, headed by Deputy Directors and Administrative Services:

- Real Property Services Department consists of three divisions: Real Estate Services, Water and Sanitation Services, and Development and Inspection Services

- Transportation Department is organized into five sections: Planning, Road Design and Construction, Transportation, Traffic, and Road Maintenance

- Engineering Services Department is organized into six sections: County Surveyor, Mapping, Right-of-Way and Control, Project Engineers, Contracts and Materials

- Flood Control and Water Resources Department

The Administrative Office of the Public Works Agency is located at the Administration Building, Third Floor of the County Government Center at 800 South Victoria Avenue, Ventura, along with the Public Works service trailer for Surveying and Roads also located at the County Government Center. Public Works owned facilities in the Lockwood Valley Road area include a residence and office, bunkhouse and shed, pump house, wood shed and light plant. Public Works Road yard owned facilities at 1768 Maricopa Highway, Ojai, include storage, office, shed and an oil house. Public Works Maintenance yard facilities at 682 El Rio Road, Oxnard, include a joint operations building (owned). The Public Works Road Maintenance Yard facilities at the Walnut Canyon Road location 1 mile north of High Street, Moorpark, includes 2 garages, storage, office building and maintenance building (County owned).

4.11.3.11 Resource Management Agency (RMA) Facilities

The Resource Management Agency has seven major divisions:

- Resource Management Agency Administrative Services Division provides central managerial, fiscal, budget, accounting, and personnel services.

- Environmental Health Division is responsible for protecting the public by identifying and managing the factors within the environment which impact public health. They accomplish this by inspecting drinking water systems, food operations, waste disposal sites and public recreational facilities.

- Building and Safety Division protects the public against hazards associated with the construction, use and occupancy of buildings and structures. This responsibility is carried out by enforcing building codes which regulate the design and construction of buildings, electrical wiring, plumbing and mechanical systems.

- Weights and Measures Division is responsible for ensuring equity in all commercial transactions by systematic inspection and testing of all commercially-used weighing and measuring devices in the County.

- Air Pollution Control District protects public health and agriculture by identifying air pollution problems and developing a long-range, comprehensive program to achieve and maintain air quality standards.

- Planning Division protects the health, safety and welfare of the general public through the administration and enforcement of County Ordinances, Board policy and State and Federal laws regarding land development and environmental regulation.

- Solid Waste Division is responsible for the development and implementation of the County Solid Waste Management Plan and the County Hazardous Waste Management Plan; negotiation and management of contract or franchise agreements with solid waste disposal operators, as required by County Ordinance; advising the Board of Supervisors and County management on solid waste matters; and coordination with cities, special districts and other private and public agencies.

The Administrative Office of the Resource Management Agency is located on the Third Floor of the Administration Building, County Government Center, 800 South Victoria Avenue, Ventura, with the RMA (Environmental Health) Cross-Connection Lab located in the Service Building at the County Government Center. Building and Safety Offices are located at 601 Carmen Drive, Camarillo (leased) and 33 High Street, Moorpark (leased). The Weight and Measurement Calibration Station is located at 600 Block of El Rio Road, Oxnard (owned).

Air Pollution Control District (APCD) office is located at 702 County Square Drive, Ventura (leased). APCD Monitoring Stations are located at nine separate locations:

- Anacapa Island - East Island near the lighthouse (leased)
- El Rio - Rio Mesa High, 545 Central Avenue, Oxnard (leased)
- Ojai - 1768 Maricopa Highway (owned)
- Piru - 2815 E. Telegraph (owned)
- Simi Valley - 5400 Cochran (leased)
- Thousand Oaks - 1135 Windsor (leased)
- Ventura - 535 E. Main Street (leased)
- Ventura - 5500 Block Casitas Pass Road and State Highway 150 (leased)
- Ventura - Emma Wood State Park at Highway 101 and West Main Street (leased)

4.11.4 CONCLUSIONS

4.11.4.1 Federal and State Facilities

While the County does not have legal jurisdiction over the placement of Federal and State facilities, the General Plan Goals, Policies, and Programs should address issues relating to continuing a cooperative working relationship exchange of information with Federal and State facility planners. Additionally, the General Plan Goals, Policies, and Programs should encourage the Federal and State government to comply with the County's General Plan and other adopted standards, regulations and land use policies.

4.11.4.2 Other County Facilities

In providing the services for which it is responsible, the County often must construct new public facilities. These projects must be planned and implemented in accordance with the overall Goals, Policies and Programs of the General Plan. In this way, the County's own review of new projects and facilities will set a positive example for other agencies having major capital improvement programs.

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Federal Government

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State Government

State of California - Department of Youth Authority, Ventura School Site Plan, July 1987.

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Ventura County

General Services Agency, Maintenance Services for County Owned and Leased Buildings, updated since 1974.

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Ventura County Auditor-Controller, County of Ventura Pocket Digest Budget 1986-87.

Ventura County Clerk and Recorder, 1987-88 Ventura County Directory.

Ventura County Agencies and Departments Goals and Objectives 1986-87 for the following agencies and/or departments:

- Agricultural Department (Agricultural Commissioner)
- Animal Regulation Department
- General Services Agency (GSA)
- Health Care Agency (HCA)
- Personnel Department
- Public Social Services Agency (PSSA)
- Public Works Agency (PWA)
- Resource Management Agency (RMA)

INDIVIDUALS CONSULTED

Federal

Gerald Little, Planning Officer, Los Padres National Forest - Goleta
Ray LuCasey, Public Information Officer, Point Mugu
Les Mainland, Liaison Officer, Point Mugu
Jeanie Pelkey, Community Relations Specialist, Naval Construction Battalion Center, Port Huememe
Russell Pyle, Public Affairs Officer, Naval Ship Weapons Systems Engineering, Port Hueneme

State

Myron Dimmett, Executive Assistant - Camarillo State Hospital
Gerald Wyatt, Business Manager - Ventura School, California State Youth Authority

Ventura County

Joe Dehorty, Communications Manager, Ventura County General Services Agency
Ray Ruiz, Manager, Ventura County Real Estate Division, Real Property Services Department
Arnold Robles, Deputy Director, Facilities & Grounds, Ventura County General Services Agency
Ann Vanderhoeven, Ventura County General Services Agency

MATCH LINE TO NORTH HALF

OJAI

SANTA PAULA

FILLMORE

PIRU

SAN BUENAVENTURA

OXNARD

PORT HUENEME

CAMARILLO

MOORPARK

SIMI VALLEY

THOUSAND OAKS

OAK PARK

NORTH HALF

INSERT NOT TO SCALE

VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.2.1

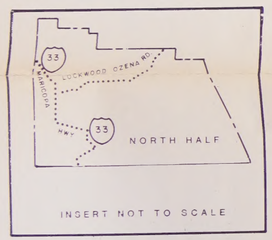
1986 REGIONAL ROAD NETWORK

FREEWAYS/EXPRESSWAYS	HIGHWAYS/THOROUGHFARES
INTERCHANGE	2 LANES
4 LANES	4 LANES
6 LANES	6 LANES
8 OR MORE LANES	8 OR MORE LANES
U. S. ROUTE	CITY THOROUGHFARE
STATE ROUTE	CITY

(2) AVERAGE DAILY TRAFFIC IN THOUSANDS OF VEHICLES MOVEMENTS (ADT's UNDER 1,000 ARE NOT SHOWN)

ADOPTED MAY 24,1988

MATCH LINE TO NORTH HALF



VENTURA COUNTY GENERAL PLAN

PUBLIC FACILITIES APPENDIX FIGURE 4.2.2

2010 REGIONAL ROAD NETWORK

FREEWAYS/EXPRESSWAYS

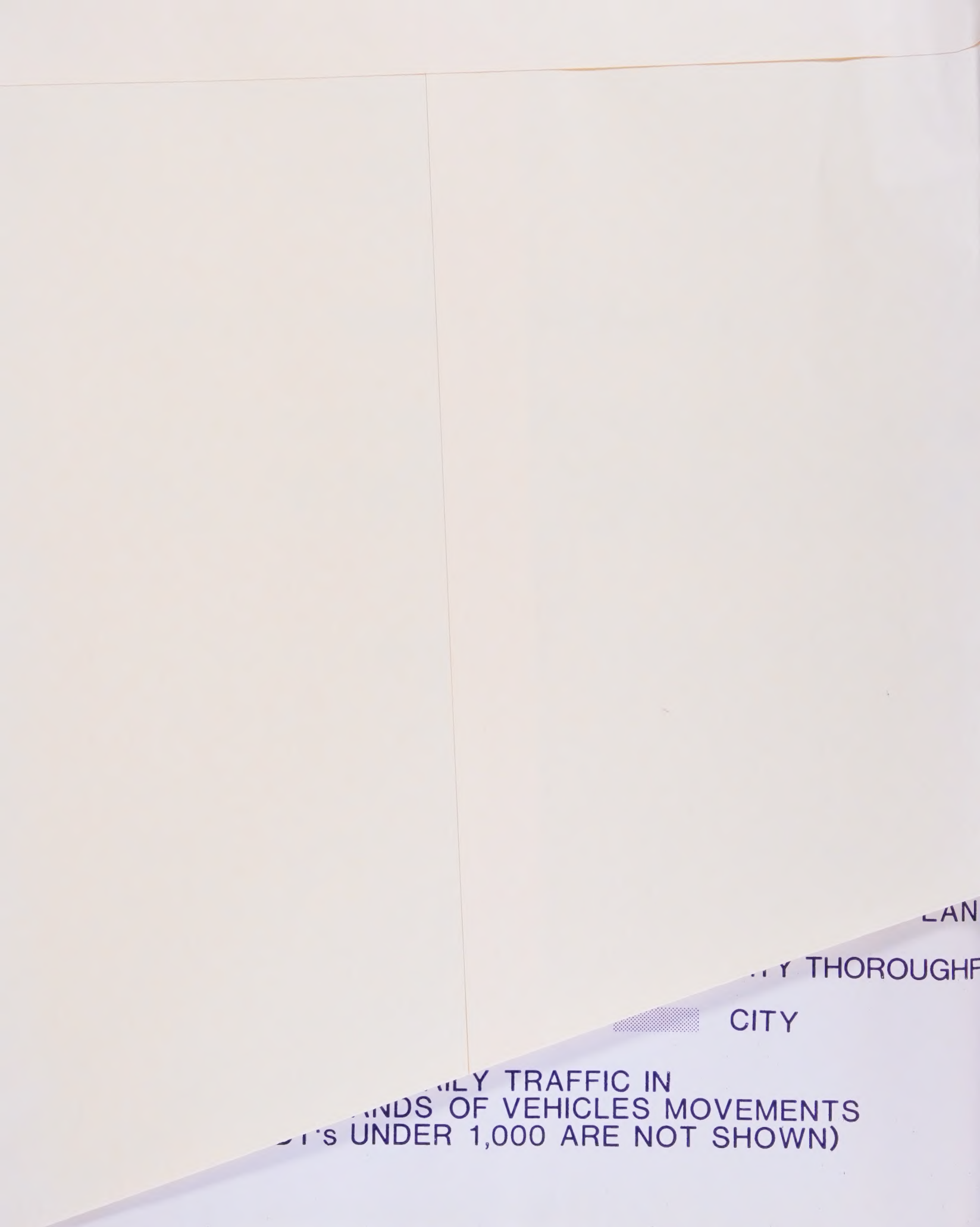
- INTERCHANGES
- 4 LANES
- 6 LANES
- 8 LANES
- 10 OR MORE LANES
- RESERVED R.O.W
- STATE ROUTE
- U. S. ROUTE

HIGHWAYS/THOROUGHFARES

- 2 LANES
- 4 LANES
- 6 LANES
- 8 LANES
- RESERVED R.O.W
- CITY/THOROUGHFARE
- CITY
- CITY SPHERE OF INFLUENCE

(2) AVERAGE DAILY TRAFFIC IN THOUSANDS OF VEHICLES MOVEMENTS (ADT's UNDER 1,000 ARE NOT SHOWN)

ADOPTED MAY 24,1988
Revised: Dec. 1989 (GPA 89-2)


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